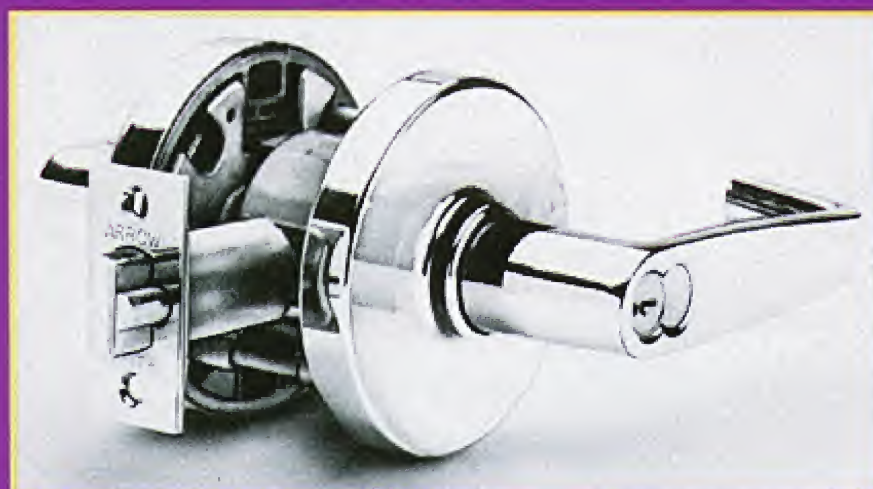


The National Locksmith®

October 1990



Contents

Features

21 Key Blank Confusion

Jack Roberts discusses the perplexing problem of the key blank numbering system. The same blank may be made by many manufacturers and have many different numbers.

28 Adams Rite Torture Test

The Adams Rite lock is factory torture tested to insure product quality. They perform tests on those poor units that no lock in its right mind would want to go through.

31 Manufacturer Profiles

In this section you will come to know more about a variety of the manufacturers making products to serve the locksmith and security industry. Read on.

62 Servicing The 1990 Excel

Bob Sieveking turns his attention to a 1990 model Hyundai called the Excel. He enjoyed working on this little car since he found it to be a breeze. So will you!

68 Safe Opening Blues!

Wouldn't you know that Dale Libby would run into problems on a nice, quiet Thursday afternoon? Read this article and find out why he came to call it 'Black Thursday.'

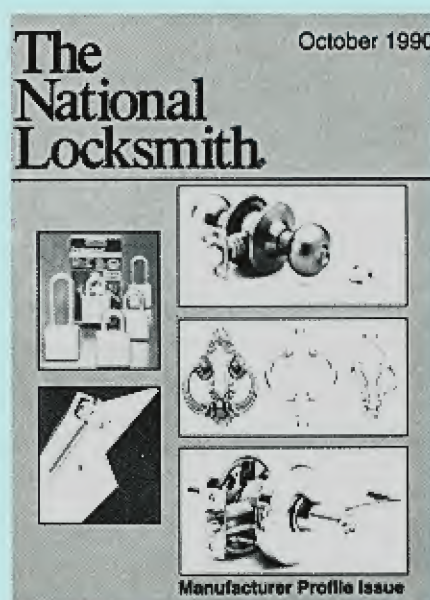
79 Impressioning Can Be Fun

Sara Probasco believed she should learn a few locksmith skills. This is her hilarious tale of suffering through the ALOA impressioning course. She mostly filed her nails.

80 National Disk Codes

These code series are presented here for your convenience. Be sure to save them for future reference. Also here you will find depth and space with key information.

*Click on the article
you wish to read*



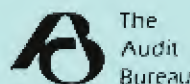
On The Cover

Five of the many companies featured in our profile section on manufacturers: (clockwise from top right) Marks Hardware; Valli & Colombo by Kwikset; Arrow Lock Co.; Zero International; and American Lock Co. Read more about all the featured companies beginning on page 31.

Departments

5 Commentary 6 Letters 9 Technitips 16 Newsmakers

Editor/Publisher Marc Goldberg
Managing Editor Sandy Kucharski
Editorial Assistant Veronica Razzano
Circulation Manager Tracey Brady
Production Consultant Marian Ranoy
Technical Editor Robert Sieveking
Technical Writers E. Lee Griggs, Ed Hill, Dale Libby, Joseph Locke, Regis McCafferty, Dave McOmie, Rick Ohmit, Don O'Shall, Sara Probasco, Jack Roberts, Shirl Schamp
Advertising Sales Mgr. Thomas Mlodoch
Advertising Sales Asst. Debbie Schertzing
Technical Advisors Richard Bushe, Robert Robinson, Sean DeForrest



The National Publishing Company

The National Locksmith® ISSN #0364-3719 is published monthly by the National Publishing Company, 1533 Burgundy Pkwy., Streamwood, IL 60107. Phone: 708-837-2044. FAX 708-837-1210. Second class postage paid at Bartlett, IL 60107 and additional mailing offices USPS 040110. Subscriptions \$30.00 per year in the USA; \$32.00 per year in Canada; \$37.00 in all other countries. Single copies \$4.00 each. Postmaster, please send change of address to National Publishing Co., 1533 Burgundy Pkwy., Streamwood, IL 60107.

©1990 by The National Publishing Company. All rights Reserved.

Printed in the U.S.A.

The National Locksmith does not necessarily endorse products or services advertised.

Commentary

Random Notes

We understand from a number of locksmiths who have placed orders with Secure USA for the Viro/tru security lockbolt that they have not received those orders. We regret the inconvenience this has caused for any of our readers. We have contacted the firm asking about delivery of the orders. However, we cannot predict with any certainty what the outcome of this situation will be. Again, we regret any expense or problems you may have experienced, but we did feel you should be aware of the problem.

The final count regarding the federal registration of locksmiths came out as follows. 503 readers voted against the proposal, while only 34 voted in favor. I believe it is very clear that quite a large portion of the locksmith community would resist any such federal registration. Those of you who are ALOA members should write to the Dallas headquarters and tell them how you feel. Those of you who are not members should consider joining. Your input counts for more as a member. Plus you will qualify for a wide range of member benefits. Contact ALOA at: 3003 Live Oak St., Dallas, TX 75204, (214) 827-1701.

Well, we here at the office are finally starting to get back to "normal." We now have a solid roof over our heads and all the damage from our Microburst seems to have been fixed. Just recently, however, a series of tornados only an hour from here killed 27 people and injured 300. I am starting to wonder why we live here in Chicago! In my native land of Philadelphia, the only natural phenomena we have to worry about are things like eating a soft pretzel gone stale, traffic on I-95 and the possibility of being run over by a Mummers band. Somehow I felt safer there.

This issue of The National Locksmith is being produced completely on a computer, Macintosh to be exact. The storm killed our old typesetting machine by raining in and on it. The technicians opened it up a week after the storm and a live bass flopped out onto the floor. They recommended we start thinking about alternatives.

The very idea of learning to use a personal computer had terrified me for some years. There are so many buttons, programs, megabytes, whoziwhatsits, etc. to worry about. I am happy to report, though, that the transition has been

smooth, and even I am enjoying my new machine. We find that producing the magazine has become easier. In the coming months, we hope to present you with a newer look. Stay tuned, and see if you recognize us after our face lift.

But don't worry...I'll still just be a guy in a "picnic suit."

I keep hearing bad things about the economy. Some of my locksmith friends, especially in the East, tell me about how slow business has been. Plus virtually every locksmith I know drives a truck or a van. Vehicles of this type rarely achieve really excellent gas mileage.

What is happening out there? I think this is a question that a lot of people are asking themselves and others. Since what has been called the "Middle-East Crisis," we are paying ever higher gas prices at a time when talk of recession is increasing. At this time I think it is premature to call our current economy a recession. I do think, however, that it does pay to keep your economic house in order at a time when the future is not certain.

As a locksmith, you need to wring every last dollar from each sale. Offer the full range of services on each call. Conduct a free security survey at each client, and point out areas of weakness which need more attention. You'll improve your customer's security, and your own bottom line as well.



Marc Goldberg
Editor/Publisher

Letters

Comments, Suggestions and Criticisms

The National Locksmith is interested in your views. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.

Prominent Locksmith Memorialized

Dear Marc:

All of us hold the hope that we'll die with our "boots on" and at a "ripe old age." Our long-time friend, Alfred T. (Al) Grumbach, managed to accomplish both of these feats, along with attaining many other important goals in his life.

Many locksmiths remember Al for his inventions including the Grumbach Speed Mortiser, and his unique impressing system. I remember Al as a locksmith who could do any job and felt proud of his profession and skills.

I first met Al in 1964, when I became engaged to marry one of his servicemen, Mark. He loaned us the money to help buy our first home, and later referred his overflow service calls to us after we became friendly competitors. He always found time to talk when we exchanged hard-to-find parts. At CLA meetings, he shared his

extensive knowledge of our trade, since locksmithing was Al's life and he was dedicated to the betterment of the industry.

Born in Fernie, British Columbia in 1909, Al began locksmithing during the depression. He and his wife travelled the country in a Greyhound bus converted to a mobile lockshop during the 1940's until he bought Ace Key Shop in Santa Monica in 1949.

A charter member of the California Locksmiths' Association, he served as secretary for many years. During CLA's early years, he also served as editor and publisher of the CLA Bulletin. Al certainly had a way with words and was a master at locksmithing and as a writer, with sometimes controversial and always interesting articles appearing in many trade journals throughout the years.

A few days short of his 81st birthday, Al was still coming through the door promptly each weekday morning at Ace Lock and Key. After a short hospitalization, Al died on June 17 in Santa Monica. He is predeceased by his wife, Christine, and son, Gilbert. His surviving son, Curtis, is operating the business in Santa Monica assisted by his nephew Bob Heilemann, who has been with Ace Lock and Key for almost 30 years.

Al was one of a kind. We will miss

him.

Diane Pirman
Dimark International
California

Tradesman Favors U-Change It Cylinders

Dear Marc:

This letter is response to the letter written by Rick Sullivan of Texas on U-Change It cylinders.

I must say that I do not think the businesses hurt the locksmith market in any way, but instead, it enhances the market. I have been called out late at night or in the early morning by a particular shoe store that used the locks on the front door.

I personally think I make more money because store managers and district managers think they know more about locksmithing and don't bother to read the enclosed instructions on how to change them. I have had locks where neither the original or the change key would operate in the cylinder to unlock the door.

District managers and store managers change the locks and don't even think to try the key to make sure the cylinder is working properly. On two occasions I've had to drill the cylinders to get the

Continued on page 96



[Click here for more information](#)

ASP - Your Auto Service Center for the World

Enter the 1990 Technitips Contest

\$\$\$ Thousands and thousands in cash and prizes! \$\$\$

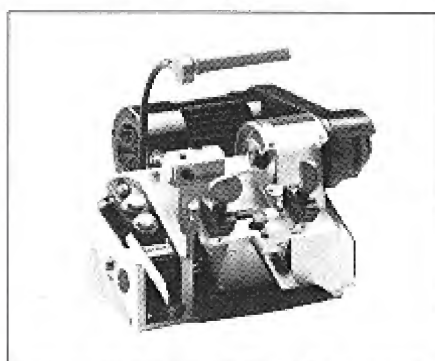
HPC Laserpoint



First Prize

This is HPC's ultimate key duplicator for high security keys, BMW, Mercedes, DOM, Kaba, Volvo and others. Laserpoint is heavy duty lever operated, and has easy adjustable cutters and tracers.

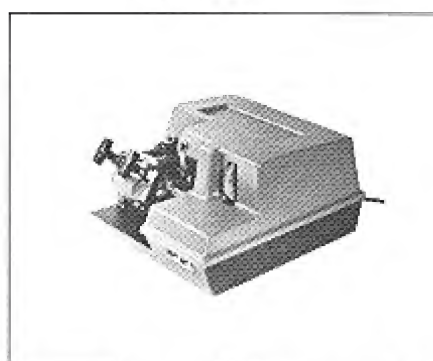
Silca Bravo USA



Second Prize

Locksmith designed, the Silca Bravo USA is a quality semi-automatic duplicator. Four-way jaws hold even the smallest keys as this. One of the most accurate key machines on the market.

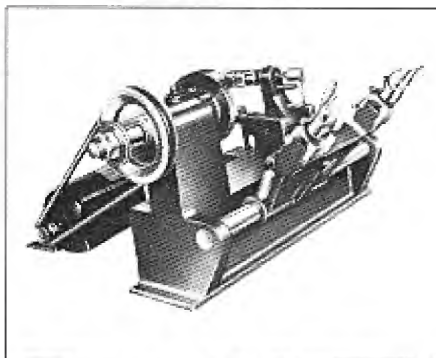
ESP 660



Third Prize

The model 660 key machine can be used for manual cutting or, with the flip of a switch, it will cut keys automatically. It is designed to accommodate large head keys such as hotel and foreign auto blanks.

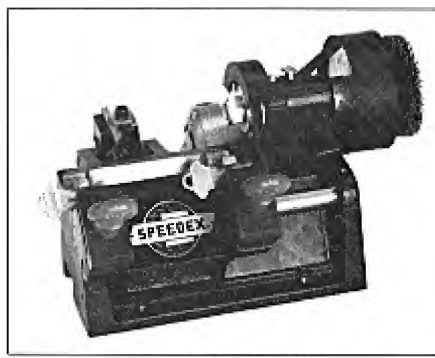
Belsaw 200



Fourth Prize

Duplicate, cut by code, cut flat steel keys. Complete machine with motor, three cutters, guides, and instructions. Built-in micrometer.

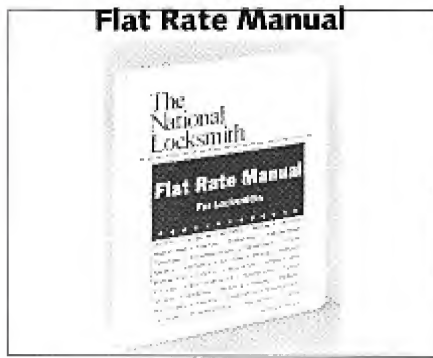
HPC 9120



Fifth Prize

HPC's newest and most compact key cutting machine features reversible jaws. Double-sided copy dog cuts flat steel and safety deposit keys and has softy brush. Excellent versatile machine.

\$100 Cash PLUS Flat Rate Manual

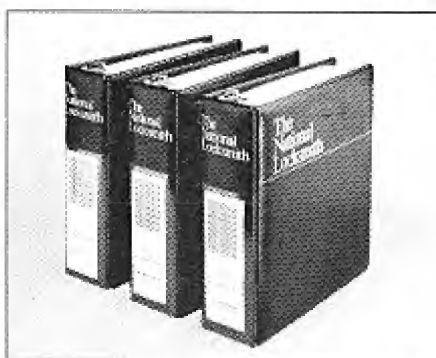


Sixth Prize

\$100.00 in cash will brighten your day! So will the *Flat Rate Manual for Locksmiths*. The manual will help you price your services for profit. You won't have to guess how to price ever again.

Code Books From The National Locksmith

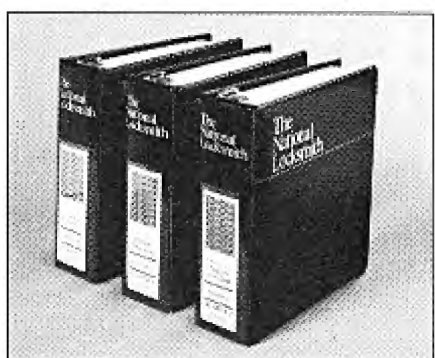
General Code Book Set (NGCB)



Seventh Prize

These three books contain 450,000 codes covering domestic lock and automobile codes.

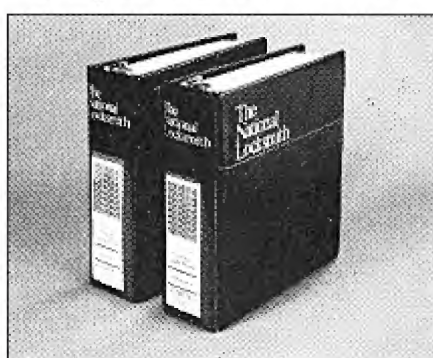
Padlock Code Book Set (NPCB)



Eighth Prize

These three volumes offer 462,000 covering Dudley, American (Junkunc), Master and Yale.

Foreign Code Book Set (NFCB)



Ninth Prize

This two volume set holds 432,000 codes for the complete variety of foreign codes, from Alpha Romeo to Yugo.

Technitips

Helpful Hints from Fellow Locksmiths



Send me your Technitips. Who knows, you may be our next winner! c/o The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

by Robert Sieveking

Congratulations to all those who find their Technitips printed this month. I found some pretty interesting material to present this month. Thank you for your participation. As you read this month's issue, you have only November and December to get those Tips in the mail. The year will pass, and all those prizes pictured on the facing page will be awarded the foremost locksmiths in the country, on the merit of their original and innovative contributions to the trade.

Why is it that I haven't heard from some of those locksmiths that I had such interesting conversations with at ALOA? Talk is cheap, but if you want to stand with the winners, you're going to have to write.

I heard a very interesting speaker the

other day. He made some observations about the state of men in this country. While driving through a fairly nice neighborhood, he observed all the lawns were well groomed, the houses neatly painted and the area was free of refuse and trash. The people that were employed, working eight and 12 hours a day, were somehow finding time to keep their lawns in the best condition, their houses painted and maintained and their

neighborhoods in good order.

This, in contrast to another area of the same town, in which unemployment is high and the people were generally home most of the time. The lawns were not taken care of, the houses were not painted or maintained and the area was strewn with all manner of trash and refuse. It seemed that those people that had the most time to maintain their property, found the least time to do so.

Win a VATS Decoder From All-Lock!

Each month, All-Lock will award one of their A-7000 VATS Decoders to the best automotive Technitip submitted this month. If you would like a chance to win a free decoder from All-Lock, simply submit your automotive tip exclusively to *The National Locksmith*. Tips submitted to other publications cannot be considered.

All-Lock's A-7000 makes it easy to diagnose system failures, service the column and select the correct key blank. This sophisticated tool is easy to use and is completely portable. Long wire leads are easy to use in cramped automotive situations.

Submit your tip, and win today!



How To Enter

All you need to do to enter is submit a tip, covering any aspect of locksmithing to *The National Locksmith*. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Robert Sieveking, Technitips' Editor, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications will **not be eligible!** So get busy and send in your tips today. You may win cash merchandise, or even one of many key machines or code book sets! At the end of the year, we choose the winners of the listed prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1990? Enter today! It's a lot easier than you think!

Every Tip Wins 'Locksmith Bucks!'

Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in Technitips wins you \$25.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker, decal and patch. Plus you are now eligible for the really big prizes!

Best Tip of the month prizes!

If your tip is chosen as the best tip of the month, you will win \$50.00 in cash as well as \$35.00 in Locksmith Bucks! Plus you will receive a quartz Locksmith watch, a Bonded Locksmith bumper sticker, decal, patch and a Locksmith Cap. Plus, you may win one of the annual prizes.

The houses, or the land they occupy, aren't the cause of the problem. The people aren't crippled or blind. They live the way they want to and wonder why they are where they are.

How many locksmiths have I visited, who never find time to clean up their shop, or the back of their truck? How many "businessmen" operating a profitable locksmith business, look like they should be "mucking out horse stalls?" Take time to clean up your act, get a decent haircut, polish your shoes, wear a clean "uniform." Wash and "wax" your business vehicle. It really doesn't matter whether you are driving a new van or if you're working out of the trunk of the family car. Clean up what you have.

Get magnetic signs for the car or have your van "professionally" lettered. If you don't look like a professional, you

will not be perceived as a professional by your customers. It is a fact of life that successful people do business with successful people. If you look successful, you will "attract the business" of other successful businesses. If you look "and smell" like something else, that is the kind of business you will attract. When you're not busy serving your customers, you should be busy getting ready to serve them by maintaining your gear so you will be better able to serve them when they call. "All things come to he who waits, if he hustles while he waits."

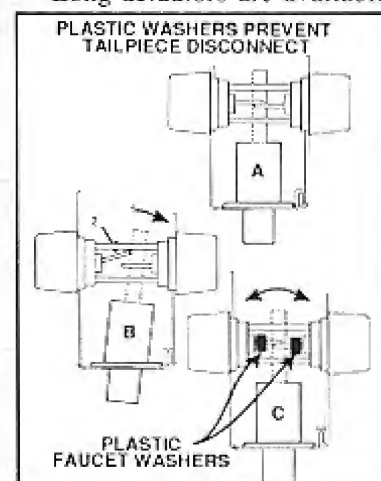
Write a Technitip...you may win a key machine that will allow you to do better work, a set of code books that will allow you to code cut keys easier or Locksmith Bucks, which you can use to buy some of the best locksmith books in print. If you buy the books, and study them to broaden your knowledge, you will be

better able to compete professionally. Compete by offering more service, better service and faster service than your competition.

October's Best Tip

This Technitip concerns the occasional problem of actuator disconnects on Schlage double cylinder deadbolts in hollow steel doors. As you can see in illustration one, the actuators lap in the center hub of the deadbolt in figure "A." If force is applied to the deadbolt, as you see in figure "B", the body of the bolt will "wobble" inside the door and, in some cases, allow one of the actuators to drop out of the actuator hub of the deadbolt. This disconnect can cause a lockout, and a very dissatisfied customer.

Long actuators are available



from Schlage, and a Door-Core™ metal door reinforcer would center the bolt to prevent this type of disconnect, but if you don't have the long actuators on the truck this Technitip will solve the problem.

Slip a tight fitting plastic faucet washer over the tailpiece actuator, up to the back of the lock cylinder. The plastic washer will act as a spacer, preventing the lockbolt from moving far enough to allow the tailpiece actuator to drop out of the bolt hub. This Technitip has saved us time, money and embarrassment. I'm sure it will be of use to a fellow locksmith.

J.F. Baker
California



**We have it all.
Quality, Value,
& Service.**

[Click here for more information](#)

Automotive Tip of the Month
This tip is the winner of the All-Lock A-7000 VATS Decoder. All-Lock will award a decoder to the best automotive tip each month of the year.

This tip is the winner of the All-Lock A-7000 VATS Decoder. All-Lock will award a decoder to the best automotive tip each month of the year.

If you're having a time getting those tiny drive pins out of the Datsun ignition lock housings, this Technitip is for you. Use a Dremmel tool and thin abrasive cut-off wheel to slice the lock case, right next to the pin. The wheel should cut into the pin at a steep angle, as you see in illustration two just below the surface. You will now have a notch in the side of the pin that will allow you to raise it out of the housing with a sharp pointed pick or small screwdriver. From the tip, you can see that the cut-off wheel only makes a small slot, next to the pin. Do not cut the pin, only notch it.

**DREMME CUT OFF WHEEL
USED TO NOTCH DRIVE PIN
FOR REMOVAL**

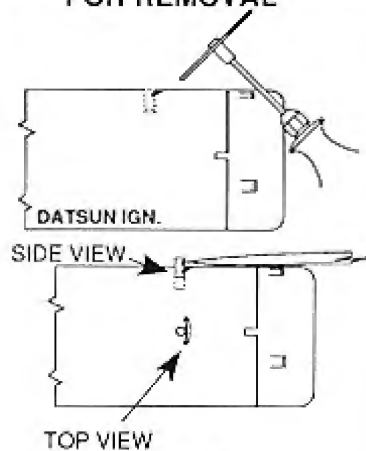


Illustration 2

This tip works equally well with the tiny roll pins used on some of the English ignition locks. Seal the slot with liquid steel after the lock is replaced.

A new Dremmel cordless, called the "Free Wheeler," makes an ideal addition to your tool kit, as it will allow you to work in tight spots that are all but impossible with a regular drill motor.

Charles Frazer
California

Everyone knows how handy a small arbor press can be around a lock shop, but very few of us ever invest in one. For pushing retaining pins in or out, or for setting the caps on Best and Falcon type removable core cylinders a small press is ideal. My Technitip is for

the use of a small drill press to accomplish approximately the same tasks as a light arbor press.

Chuck up a flat tipped punch or an appropriate pin punch in the drill press. Holding the lock cylinder in an appropriate vise or holding fixture, bring down the spindle, as if you were drilling a hole. The motor is off of course, but you will be pleasantly surprised at the amount of force you can apply, even with a small table top drill press.

When setting the spring cups on Best style cylinders, you can adjust the depth stop to prevent over-compressing the cap into the cylinder body. Pressing the

cylinder body rivets in or out of the large brass rekeyable Yale or Corbin style padlocks, instead of punching them with a hammer, greatly simplifies disassembly, and reduces most accidental damage to the padlocks. This is an old machine shop tip, but if you try it, you'll like it.

Jim Burdshall
Arkansas

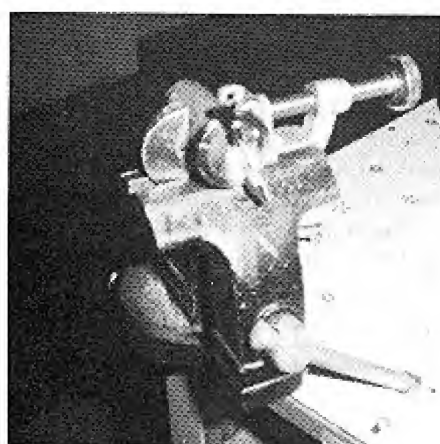
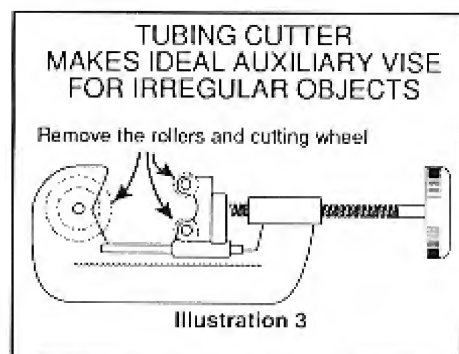
Here's a handy little Technitip that will allow you to salvage that old tubing cutter that no longer does such a great job, and give it new life as a fixture for



*The Innovation You
Expect, with the
Flexibility You Need!*

[Click here for more information](#)

holding irregular shaped lock cylinders in your shop vise. Illustration three is typical of the inexpensive tubing cutters



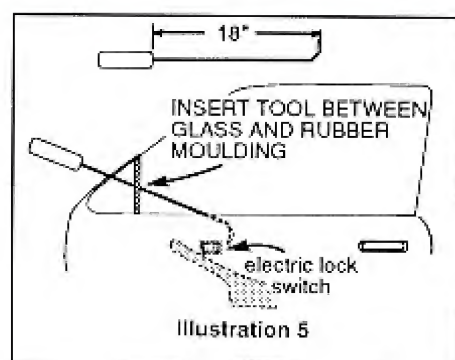
4. The auxiliary vise clamped into a shop vise.

that are common in electrical and copper water pipe installations. By removing the rollers and cutting wheel, you will have a fairly sturdy clamp for round or odd-shaped automotive lock cylinders. The auxiliary vise can be clamped into your shop vise, or drill press vise, to hold the lock cylinder for drilling or service. (See photograph 4.)

This little tip will hold an automotive, rim or mortise cylinder better than most conventional vises because of the "C" shape of the jaws. The cylinder will not wiggle or work out of the vise jaws. A piece of rubber in the jaws of the clamp will prevent it from damaging the finish of the lock.

R. Lazich
Wisconsin

This Technitip concerns opening the '90 Camaro IROC with electric locks. It seems that the KSP security package has made opening this auto at the electric lock solenoid a lot more difficult. As you can see in illustration five, it is not terribly difficult to insert a "round" wire opening tool between the front of the door glass and the rubber window molding. Do not use a "square" wire tool at this point, as the slightest nick in the glass will shatter it. Carefully lubricate and slide the tool into the passenger



compartment. Rotate the tip of the tool to contact the electric lock switch and the doors will be unlocked, completing the job. Use extra care when opening a car in this manner, as the tempered side glass of most modern autos can be easily shattered.

Rick Sullivan
Texas

I have worked for several years, doing lock work for a nursing home. This particular facility uses Best locks. My Technitip concerns freeing locks that are fouled by dust. The key enters the lock, but will not operate. In some cases the pins stick in the plug, which prevents them from falling far enough to make the shear line, and in other cases, the key is prevented from fully entering the keyway by a build-up at the rear of



HPC, Inc.
Designing Excellence and Manufacturing
Quality since 1956

[Click here for more information](#)

the plug. (Best keys use a "tip stop," at the bottom of the keyway.)

Most locksmiths will reach for the WD-40 and compound the problem, causing a sticky mess. My Tip is to wash out the lock with "water." Medicine dust, which fouls the push locks of the medication carts, can be easily dissolved by water, but spray oil won't touch it. In some cases, water is the best "solvent" for the job. Use a medical syringe to force the water through the lock. When called to clean a sticky lock, give some thought to using the right solvent to suite the material you're trying to dissolve. Stay away from the WD-40, it turns to a sticky varnish over time.

William Honeywell
Iowa

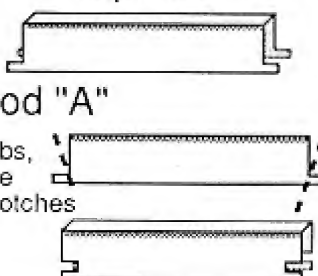
This Technitip involves the replacement of Ford door cylinder spring retainers. Instead of trying to reopen the staked spring retainer grooves, on either side of the upper spring compartment, try one of the following solutions.

Method "A" involves removing the tabs on the spring retainer, as shown in illustration six, so that the retainer can be installed between the existing stake marks. New notches are filed into the ends of the spring retainer, so that it can

Ford spring retainer replacement

Method "A"

Cut tabs, and file new notches



Method "B"

Cut "V" notches, and bend the retainer

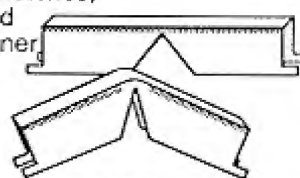


Illustration 6

be staked into position after it is installed.

Method "B" also shown in illustration six, involves cutting (filing) "V" notches in the retainer so that it can be bent as shown. This reduces the length of the retainer at the tabs, so that it can be started into the grooves of the lock cylinder. By carefully starting the four tabs into the grooves on either side of the

upper spring compartments, and gently tapping the retainer into place, the tabs will slip under the old staking as the retainer is straightened out. It can then be restaked in position.

This Technitip can save a lot of time when servicing or rekeying Ford door cylinders.

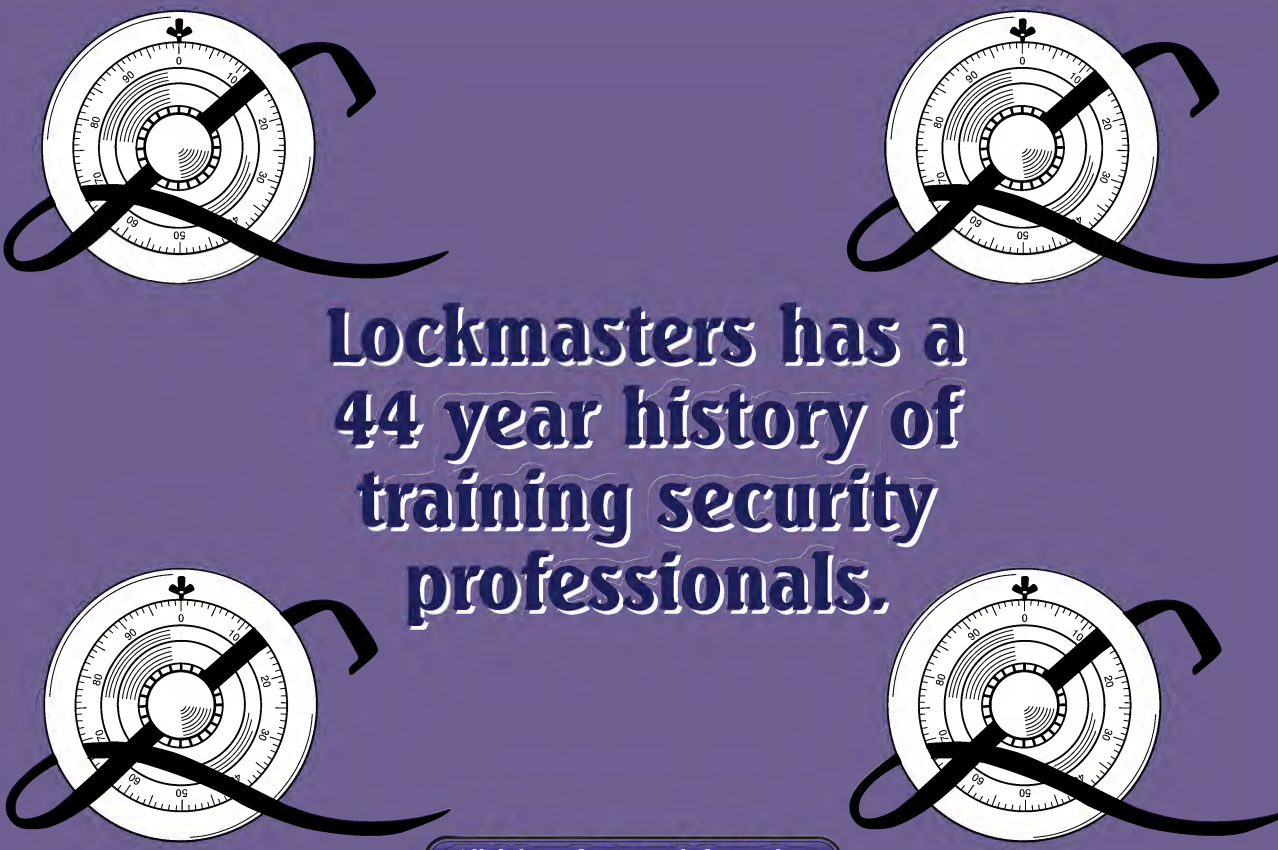
Leo Tocheck
Ohio

This may not be a Technitip, but it seems like everyone has a problem removing the "C" and "E" rings from lock cylinders. Of all the tips I've read, no one has looked to the obvious. Kwikset has made a tool available to service their deadbolt and knoblocks for a number of years. It was designed specifically for the purpose of removing and servicing Kwikset cylinders, but works equally well on many others.

Illustration seven shows the Kwikset #1467 "cylinder removing tool." The "V" end of the tool can be inserted into



Kwikset KW-1467
Cylinder Removing Tool
Illustration 7



Lockmasters has a 44 year history of training security professionals.

Click here for more information

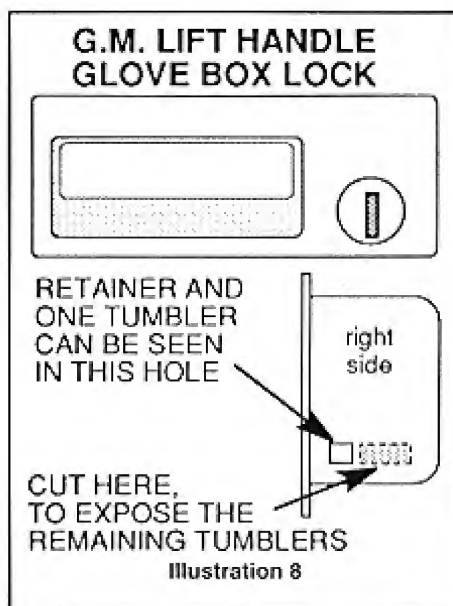
the knob spindle of a standard Kwikset knob lock, to easily unclip the cylinder retaining ears. The "V" can then be used to push the retaining clip off the back of the lock plug. The small end of the tool is used to compress the knob locking slide, to remove the inner spindle or locking actuator.

The tool is a must, if you work with Kwikset, and it's also a good "all purpose" clip tool. Why reinvent the wheel?

Lawrence Daley
Florida

Here is a little Technitip that I have used to find the first four cuts of a GM door and trunk key from the glove box, when the glove box uses the new lift handle style lock. They can be a problem sometimes.

On the right side of the glove box lock, as you see in illustration eight, there is a small square opening that exposes the plug retainer and the first combining wafer when the lock is picked to the locked position. The remaining three wafers are concealed by the plastic lock body. By cutting a second opening, as shown in the



illustration, immediately behind the first, the remaining wafers can be seen and decoded.

This method requires that the lock be removed from the glove box lid and then replaced after the key has been fitted. The hole will not be noticed or compromise the security of the lock, because the plastic shell of the lid covers the lock completely when it is installed.

Larry Mazzelli
New York

Editor's Note: If you have picked the lock to the locked position after

removing it from the glove box, simply pick it in the locking direction a second time and, while maintaining tension in the locking direction, depress the plug retainer. The plug will rotate another 20 degrees and be free of the plug retaining lug at the rear of the plug. The plug can then be easily removed from the lock body and decoded. This method requires no cutting of the lock body.

A second and much preferred method of finding the cuts to this four wafer lock would be to simply read it. I have used the reading method with great success and feel it is by far the most profitable way to make this key. It does not require that the lock be picked or removed from the glove box. Use your Locksmiths bucks to buy *The National Locksmith Guide to Wafer Lock Reading*. It was written to make your job easier and more profitable. Read and learn, and stop wasting time disassembling these locks.

This Technitip may help some of those locksmiths that are having trouble seeing the inside of the door or the linkage, on cars with blackout window tinting. On a bright day, it is nearly impossible to see into the auto to manipulate the lock button.

Continued on page 96

Major
MANUFACTURING, INC.

Installation Tools

The Professionals Choice

[Click here for more information](#)

Newsmakers

New Products and Industry News

Security Lock's Installation Catalog

A "Installation Kit" catalog from Security Lock Distributors contains all the information needed for the routing of openings in aluminum doors and frames.

Whether routing openings for locks and latches, cylinder holes, hinges, MS bolts, latch strikes, electric openers, armored collars or mounting tabs, this fully illustrated catalog represents a valuable buying and reference guide.



Circle 243 on Rapid Reply

Lucky Line's Display Rack

Lucky Line adds a new skin card merchandising unit to its product line.

The rack, designed for stores with limited counter space, measures only 14"x24"x8", and is a single panel rack of 12 popular items, with 115 unit pieces.



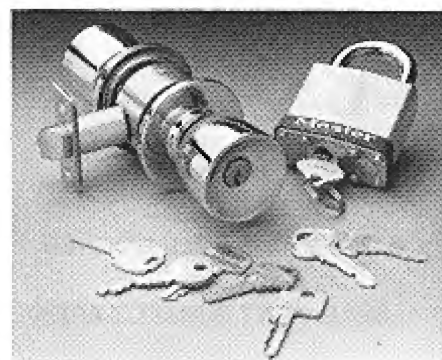
Circle 244 on Rapid Reply

Master Lock's System 29 Padlock

Designed to allow the opening of padlocks and doorlocks with the same key, System-29 from Master Lock is compatible with Dexter, Corbin, Falcon, Sargent, Schlage, Medeco, Yale and Weiser door hardware.

To key a System-29 padlock to a doorlock, simply fit the appropriate lockset cylinder with a Master Lock adaptor, insert the assembly into the padlock body, and secure with a hex wrench.

A rugged, rust-resistant, 2-1/2" wide laminated steel body fully encloses the padlock cylinder for tough security protection. Master offers System-29 padlocks with 7/16" or 3/8" diameter, high-tech shackles and a choice of shackle lengths.



Circle 245 on Rapid Reply

medeco
HIGH SECURITY LOCKS

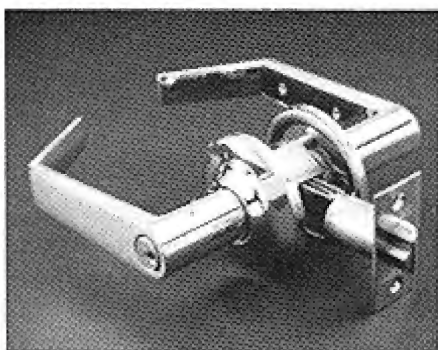
[Click here for more information](#)

The market leader
in locking systems
for security, safety,
and control.

Falcon Lock's New Products

Falcon Lock, introduces four new products ideally suited for diverse installation requirements.

Falcon's new H Series Interconnected Locks offer both security and cost efficiency in a dual purpose lock, and the functions range from latchset/deadlock, entrance door lock to hotel/motel lock.



Falcon's F Series, key-in-lever, key-in-knob locksets and latchsets provide security for light commercial construction, and is available in two popular knob and lever trim designs. This series meets ANSI A156.2, Series 4000, Grade 2 requirements.

For light commercial applications

where handicapped requirements must be considered, Falcon designed the affordable and functional G Series lever lockset/latchset. The series complies with ANSI A156.2, Series 4000, Grade 3 applications.

The N Series locksets and latchsets are constructed of high quality materials which offers both security and aesthetics. The N Series is available in two knob trim designs and meets ANSI A156.2, Series 4000, Grade 2 requirements.

Circle 249 on Rapid Reply

Gil-Ray Tools' Replacement Cutters

Gil-Ray Tools Inc. recently added several new replacement cutters to its cutter inventory.

Currently, Gil-Ray has new replacement cutter wheels for the Borkey, Rytan, Silca, Framon, Jensen, Ileo, HPC, Dominion, Sager, ESP, HK, Taurus, Bollini and Scotsman key machines.

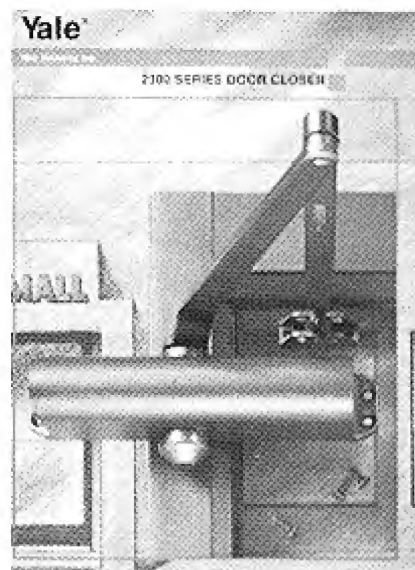
Gil-Ray Tools also offers a mail-in cutter sharpening service for all types, styles and brands of dull cutters.

Circle 248 on Rapid Reply

Yale Security's New Publication

Yale Security Inc. presents detailed information on Yale R 2300 Series door closers in a new four-page, four-color publication.

The American made 2300 series, profiled in the brochure, are recommended for commercial and industrial applications where the emphasis is on economy.



Circle 250 on Rapid Reply

NATIONAL AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

www.laserkey.com

Detex's Free Promotional Offer

Detex Corporation offers locksmiths a free promotional poster and door decal in order to help generate additional sales from its walk-in traffic.

The colorful materials informs customers of the fact that the locksmith carries the full line of Detex access control products, exit control locks and

exit alarms.

The poster highlights key features, including the strong Detex warranty, reputation for quality and a toll free hotline.

Circle 278 on Rapid Reply

Diebold's New Product Catalog

Diebold, Inc. introduces a new mail order catalog which offers a wide range of security products for financial and commercial markets.

The full-color, 36-page Diebold direct security catalog features a complete selection of burglary and fire-resistant chests, video surveillance systems, access control systems and undercounter work stations.

Diebold ships products worldwide from Ohio, and most items are shipped via UPS or motor freight, with overnight delivery available.

Circle 279 on Rapid Reply

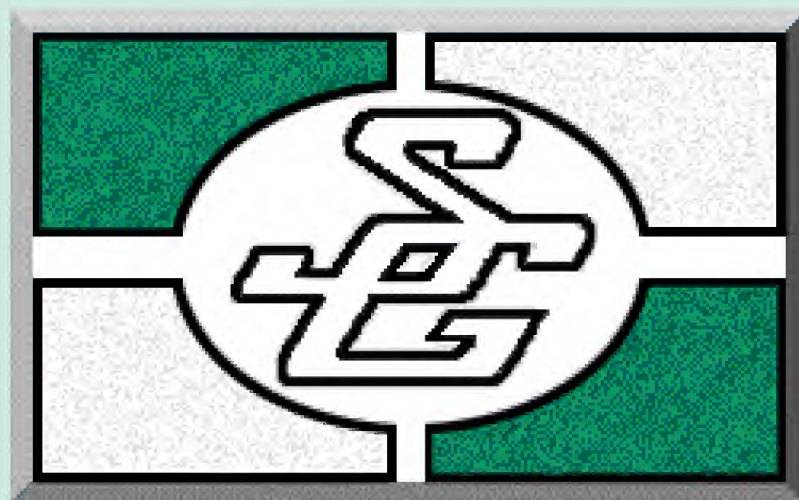
National Locksmith Suppliers' Video Program

The National Locksmith Suppliers Association unveiled a unique program to help locksmith dealers increase sales and profitability by mastering the skills needed to attract and better serve customers.

The program consists of a series of videotape presentations combined with corresponding workbook exercises, provide practical tips on recognizing and utilizing the ingredients necessary for a successful retail operation. The three different programs offered are "Basic Retail Sales," "Let's make Friends...and Not Lose Customers" and "Effective Visual Merchandising."

Each videotape is complemented by workbooks produced by the Association specifically for use in these classes. The workbooks outline the highlights of each of the films and feature question and answer sections designed to reaffirm the program's important points.

Circle 280 on Rapid Reply



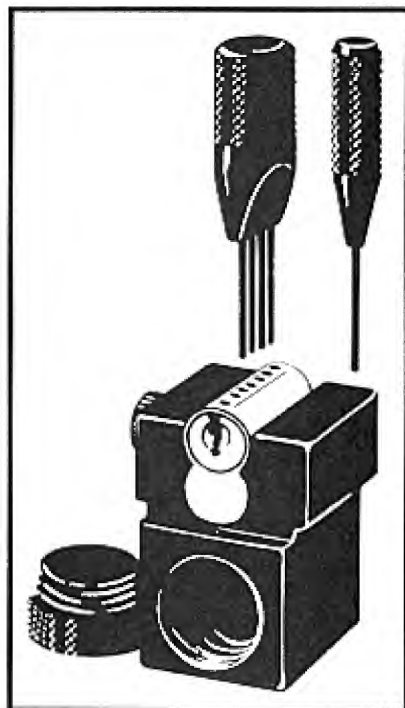
**Make Sargent & Greenleaf's
Comptronic locks your choice for
electronic safe locking solutions.**

[Click here for more information](#)

A-1 Security's New TB-3 Tool

A-1 Security Manufacturing Corp. adds the TB-3 to its tool product line for servicing interchangeable cores.

The TB-3, designed for use in dumping pins and springs from up to 24



cores, allows the user to keep both hands free for work. The TB-3 is similar to A-1's interchangeable core blocks, in its ability to service Falcon.

Circle 281 on Rapid Reply

Locksmith Supply's New General Manager

Locksmiths Supply Co. has appointed Brian Jenkins as general manager of the New South Wales branch of the company.

Brian Jenkins is originally from New Zealand, where he held senior executive positions for 22 years with the Healing Group of Companies. Supplies to the Hardware and Paint Industry.

Three and a half years ago, he was transferred to the Healing Group's operations in Australia, and headed up the Companies' paint division.

Brian Jenkins' appointment is part of a management restructuring program being undertaken by Locksmiths Supply Company. This program recognizes the continuing growth of the company which requires a more marketing orientated approach to its product range, with emphasis on customer relations and efficient service.

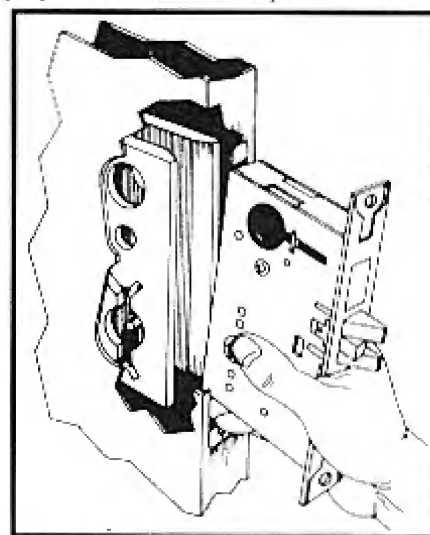
Circle 282 on Rapid Reply

ESP's Mortise Lock Support

The # A2565 Amers Mortise Block from ESP Corporation, is used to support mortise locks in hollow metal doors.

A special adhesive coating keeps the A2565 secured in place while the mortise lock is inserted and then the cylinder can be tightened securely without binding the spindle. This eliminates lock movement when the door is closed or slammed.

The A2565 is made of rigid polyethylene foam with pre-cut holes.



Circle 283 on Rapid Reply



SCHWAB CORP.

Fire protection for your vital records.

It's not safe unless it's Schwab Safe.

[Click here for more information](#)

Key Blank Confusion

"My keyboard was a total disaster and almost resulted in a two day notice to get a key made. I then tried to organize the board differently, but it didn't help."



Send your lock and key questions to Jack Roberts, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

by Jack Roberts

From the very beginning of my entry into the locksmithing field, key blanks and the numbering system used by the various manufacturers have literally driven me up the wall, because I have never been able to understand why everyone cannot simply call a spade a spade.

Sure, certain things are standardized, such as SOS meaning HELP anywhere

in the world, but sending for help depends on the location of the SOS and whether it is in standard, daylight savings or Greenwich mean time. (GMT is the world standard.)

The building, lumber, plumbing and electrical trades are pretty well standardized and everyone in the electronics field seems to speak the same language. But when using key blanks, everyone has his own idea for an identifying number. I realize that design, production, distribution, and inventory of any item must be identified in some manner, and while this identification is generally referred to as a stock number, each manufacturer of any product has their own unique numbering system.

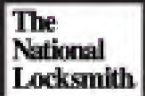
One day, in the distant past, I went to the local bicycle shop to get a key made and was informed that key cutting had been discontinued to make room for more bikes. I operated a small retail business at the time and decided that key cutting might be a nice addition to the locksmith trade.

In a matter of minutes, the bike shop owner and I cut a deal. Where I had started to get a key made, I was now the confused owner of a key machine and hundreds of key blanks, and little did I realize what was to come in future years. The key blanks I received were Jeco. (This was a division of The National Key Co. and were the initials of J.E. Cole. In 1959 this company became the Cole National Corp. which

SRI
SECURITY
RESOURCES INC.

SRI and Steve Young are working together to bring you the best in locksmith tools and supplies.

[Click here for more information](#)



is now Cole Consumer Products Division of American Consumer Products, Inc.)

The catalogue was small, and the total number of blanks listed was within my limited abilities to control. My key machine had a four panel (eight sides) carousel with about 40 hooks to each side. I then began studying the numbering and identification system.

The shop owner gave me some brief instructions on key cutting and told me that if I had trouble identifying a customer's key, then to match the head (bow) with something on the carousel and then look at the grooves. (I suppose that this method is still the most used of

any key blank identification and it is always a good place to start.)

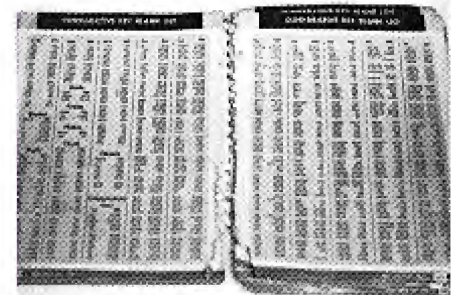
Newcomers to the current locksmith profession must realize that only a few years ago help was nonexistent. Even if one had the nerve to ask the fellow down the street a question, the answer would probably be "wrong," "check your catalogue," or "I'm not here to teach a competitor the business."

At about this time I learned there were other companies manufacturing key blanks and I then acquired a Keil catalogue. But the numbers were totally different than what I had learned by starting with Jeco's alpha-numeric system.

During this period, I built my first keyboard with a piece of plywood and a hand full of finishing nails, designing my own method of locating blanks. I put A B C across the top and 1 2 3 down the left side with a cross reference locator book. In theory, the idea looked fine, but in practical use it was a total disaster and almost resulted in a two day notice to get a key made. I then tried organizing by house, auto and padlock categories but that did not work.

From somewhere I acquired a set of stick-on labels that listed several manufacturer's numbers on each label, and this was a big assistance in my work, but as new blanks entered the inventory there was no space to put them in logical order since I neglected to leave empty hooks or nails for the expansion of the board. Each time space was made, practically everything on the board had to be moved, including the stick-on tags.

Numbers began to show up from the various manufacturers of the era and the cross reference pages of the Keil catalogue were getting worn. (See photograph 1.) I could not and still can't figure out why there were so many numbers used to identify one little piece of brass.



1. The worn pages of the Keil catalog.

My Keil distributor started occasionally substituting Ileo blanks and these numbers threw me another curve, along with the confusing key blank boxes, which came in all sizes, shapes and colors making storage and identification difficult. Too further add to my confused state, the distributor added the Dominion line, which included more numbers and another size and shape key box. (See photograph 2.)

By buying key blanks by the box, I had no real intelligent knowledge of what I should stock, so I began accumulating blanks that would never be used. At this time period, I was able to identify a customer's key and find it on the keyboard in less than five minutes.

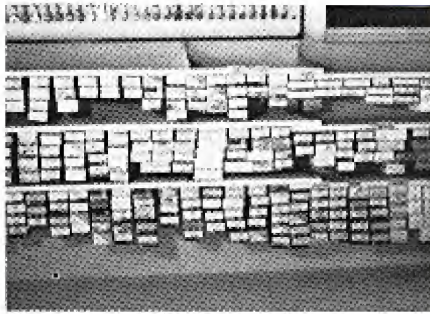
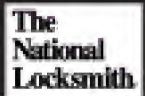


STRATTEC™

**It's your
reputation.**

**Trust the
original.**

[Click here for more information](#)



2. The Dominion line.

During this time frame, a new distributor appeared, who had the Taylor line and would sell blanks in lots of 10, call every two weeks, restock my keyboard himself, and was able to answer most of my questions. He also offered many helpful suggestions for solving my number system dilemma. Here was a new set of numbers and another catalogue for cross reference.

It was apparent by now, that if I were going to succeed in this business, I had better find a logical solution for myself to locate a particular key blank quickly and easily. I was becoming rather adept at identifying the round head Yale key and the square head Kwikset key, and could get a customer out of the shop in less time then it took him or her to read the entire front page of the morning newspaper. Anything

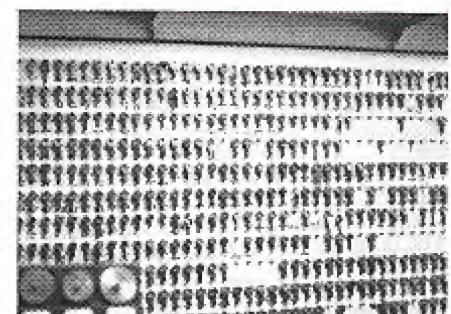
else requested took some page flipping and board scanning.

I studied the Ilco, Keil, Taylor, Dominion and Jeco catalogues, noticing that each of them were alphabetized by manufacturer starting on page one.. But all similarities between the catalogues stopped right there. Keil's lowest key blank numbers are 2A, 2B and 2C which would appear to be the starting place for its key numbering system, but these numbers are for the Yale 8, 4, 5 and 6 pin blanks which Yale refers to as 9-1/2, 8 and 11.

My Taylor distributor began to substitute Star and ESP blanks, with Keil fading from the scene and Jeco becoming Cole National. I now had dozens of numbers to contend with for just one keyway.

Plus, customers started to bring in unknown numbers like Osco 99, Hazelton 3632 and Atlas A1. After a careful analysis of all these numbers, the only thing that made sense to me was to layout my keyboard according to the alpha-numeric system used by Curtis and Cole National.

The logic of this system was to take the first and second letter of a manufacturer's name, adding numbers as new blanks were introduced. I then rearranged my keyboard, which had



3. The I.D. tag and blanks in sequence.

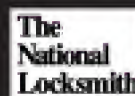
now become a pegboard with hooks, and started using a 1-3/8 x 2-3/4 cardboard tags for identification. When something then had to be moved, the hook, ID tag and blanks came off the board as a unit and could be placed in sequence easily. (See photograph 3.)

I started with the letter "A" and went down the line alphabetically, but, I was mixing domestic, domestic auto, foreign, foreign auto, and motorcycle together. I soon discovered that it would be better to section the board by categories. The board eventually wound up like this, and with a few exceptions, this is how it currently hangs. If an alpha-numeric number doesn't exist for a particular blank, we invent one by adding a number to the alpha-prefix and putting it into the board sequence. (This does not apply to our foreign car



ASP Covers the World of Auto Locks

[Click here for more information](#)



section.)

The alpha-numeric system, used by Curtis and Cole and National, was adopted in 1945 by Star Key and Lock Manufacturing Co., by ESP in the early 1970's, and by Jet Hardware Manufacturing Co. in the late 1970's. The companies do not use exactly the same numbers, which contributes to further confusion. Star Key figured that if Y1 was good, then YA1 would be better, and to make things even more appropriate, the company prefixed a number to signify how many pins. For example, the Yale 8 keyway now became 4YA1, 5YA1 and 6YA1. Jet and ESP stayed with the single letter "Y" following the Cole-Curtis system.

In the late 1960's and early 1970's, Ileo introduces the EZ line which was first sold to hardware stores only. Later in the early 1980's, the line was first sold to locksmith distributors. These blanks have the Ileo number and the EZ (alpha-numeric) number embossed on the bow, but does not exactly follow the Curtis-Cole systems. The EZ numbers will put you in the right section of your board if it is laid out in alpha-numeric order.

Silca started showing up in the 1980's with another numbering system and the Image Line from Silca (USA).

catalog #403, which uses the original manufacturer's number, is currently available.

We are also constantly faced with generic or private brands which have a name, but no number, etc., etc. The identification of many of these keys is accomplished only by using skill and knowledge from eyeballing the grooves. We have identified more than one hundred brand names, ranging from Aero, Bird, Chun Kam Kee to Wartian, World and York which use the Yale 8 (Y-1) keyway.

The list of private brands using the Yale 9114 (Y-11) keyway is almost endless. It has been stated that locksmiths duplicate only about one third of all keys duplicated in the North America, yet, how many times has a customer come into your shop and stated, "I have been 'everywhere' and can't get this key made. Can you make it for me?" Of course you can make it. The key cutters at the hardware, grocery or specialty stores could also make the key. They just didn't know that the correct blank was on their board, and this is where locksmiths show up as professionals.

But, how do we as professionals, find the answer to a problem that is almost as involved as the national debt

and continues to grow at about the same rate. The 1953 Ileo catalogue shows approximately 765 domestic and domestic auto blanks and 35 years later, the 1988 catalogue has near 1600 blanks in these categories. We only sort this out with great difficulty, if at all.

Key blank catalogues and key reference guides are essential for identifying numbers and one can't have too many of these on hand. Never throw away an old catalogue. The Ileo/Unican No. 60 Key Blank Directory (1988) is one of the most up-to-date reference books published, but it does not give cross reference to Atlas, Barrows, Challenger, Chantrell, Clinton, Eagle and Earle.

You may not see many of these names any longer, but they are still out there and you will come across them in your shop occasionally. Cross referencing two, three or even four times from an older catalogue is often necessary to identify a substitute that you probably have on your keyboard. The new Curtis and Cole catalogues have several pages which list hundreds of brand names and which blank or blanks may be appropriate for your job.

Logical keyboard layout is essential and every shop has its own way of doing this, and of course, every shop



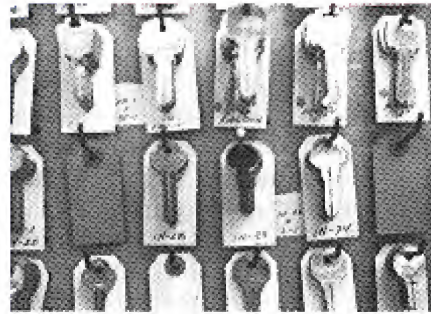
Don't panic!
We have Security
Exit Devices.

[Click here for more information](#)

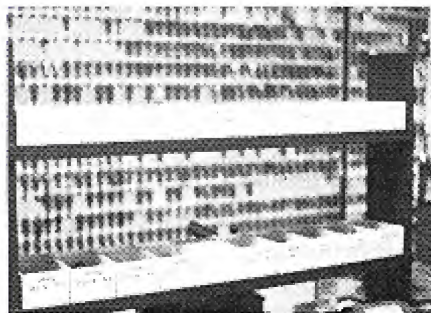
believes that their system is the best way to go, although everyone I talk to admits that there must be a better way. Keyboard space today is at a premium and six or seven numbers for the same keyway, scattered around the board wastes that valuable space. We use a marker, placed between the hooks, to indicate a substitute for a particular blank. For example, IN1=IN18; IN3=IN20; IN33=L1 and ER1=SE1. (See photograph 4.)

This method conserves keyboard space and at the same time reduces inventory. We stock very few four pin blanks, electing to duplicate on a five pin, and then tip the blank with our 1" belt sander which is located on the key machine bench. Do not tip a blank by grinding it on the cutter wheel unless you want to get hurt. We stock a few master sections, but never use them as a substitute for a sectional.

All of us generally should know which keyways are most prevalent in our own marketing area. At the same time, we have to second guess the public and carry many of the less popular blanks. Our board now has four sections for domestic, domestic auto, foreign auto (including motorcycles) and high security auto. (Flat steel and



4. A marker between hooks indicates blank substitutes.



5. The rack holds the most used blanks.

bit keys are another subject.)

I define domestic as a blank that isn't for a motorcycle or an automobile. (Foreign or domestic.) The first hook on our board is AB1 which we were using long before any of the manufacturers started. The 1980 Taylor catalogue does

not list Abus under any number, and as previously mentioned, if an alphanumeric number doesn't exist, we invent one that will fit into our general layout.

We make every effort to group manufacturers and keyways in order to conserve board space, and as professionals, we should be able to identify a customer's key with some degree of accuracy and speed by looking at the grooves regardless of the shape or the embossment on the head or bow.

The most popular blanks for our shop do not have a hook on the keyboard but are in boxes on the key machine bench, and this saves steps and time, while conserving keyboard space. One shop that we visited has a rack built above the key machines to hold 20 boxes of the most often used blanks. (See photograph 5.) This is a neat and adoptable idea.

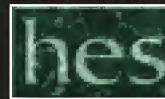
We use different colored identification tags to subsection our board and use colored stick-on dots for different pricing groups. A plain tag means our lowest charge for duplication of a key and each pricing group from there is identified with a colored dot. A

Continued on page 96



**To be a World Leader You Need Quality Products,
Innovative Technology and Strong Partners.**

[Click here for more information](#)



Adams Rite Torture Test

"The requirements the lock must meet are so stringent that the company still does several severe destruction tests on a random sample basis."

by Jack Buzard

The familiar Adams Rite M.S. R deadlock for storefront doors is over 30 years old and you might think that by this time it would be a routine product, stamped out like a commodity item. A visit to Adams Rite's California factory proves otherwise.

The requirements the lock must meet are so stringent that the company still does several severe destruction tests on a random sample basis, and they also individually test every single complete lock on some of the lock's finer points. Quality control tests of dimensions, hardness and plating are also carried out on components before assembly.

Cycle testing of a quarter million lock/unlock cycles is one of the random sample tests that take several days to complete. During the test, locks are mounted with the company's 7760 electric actuator motor and turned on. Bolt loading (side load on all bolts and a pull-load on hookbolts) is also performed with a side load capacity of 1,800 pounds and pull of two tons, the minimum weights for passing.

Attempts to attack the swing-up bolt with a hammer and bar are simulated by a five pound blade dropped from a height of three feet and this creates a 15 pound bolt impact within a quarter inch of the lock face. The lock is mounted so the shock is transmitted to solid concrete, thus, the blow is not "cushioned" as in a hung door. Twenty blows is considered minimum, but examples regularly go to 50 or more.

The Adams Rite unit is designed so that the ultimate failure will consist of the actual lock case literally tearing apart, and the critical part is the bolt operating arm which, in the overall center locked position, is the member that takes the abuse. If the hardening of the arm is too little, it will bend, which allows the bolt to droop down, which if it's too hard, the arm is brittle.

Simulation of hacksaw attacks on the bolt is done with both hand tools

and band saws, and a minimum of 30 minutes "burglar delay" is required.

One of the tests that is performed on 100 percent of Adams Rite M.S. R locks is a test for compatibility with cylinder cams by other manufacturers. The entrance lock is often fitted with a mortise cylinder of the same type the rest of the building is keyed to, so it must be able to accept a wide variety of tolerances. Each lock is operated with a cam out-of-spec long and another out-

of-spec short. Different cylinder types also use slightly different thread depth and pitch tolerances, so Adams Rite constantly monitors the lock side plates to assure compatibility.

Hopefully, this article has given you a clear idea of the ways in which Adams Rite strives to produce quality products. The locks are torture tested to ensure that they meet the company's requirements.



The Adam's Rite M/S.R. deadlock holds up to violent attacks.

Locksmith Manufacturer Profiles

In this section, a variety of locksmith manufacturers present you with vital information about their background and regarding their product line. This is a good chance to get to know your manufacturer better. The manufacturer depends on you, the locksmith, to get his product to the end user. Therefore, most companies are happy to help the locksmith with information, literature, and even training.

Abloy Security Locks, Inc.

The Abloy standard products are used in both the coin-op and OEM markets. Most major vending, bottling and laundry equipment manufacturers and distributors use these products. Abloy also has a major share in the pay phone high security lock market. Additionally, Abloy now offers the improved Disklock product that is available in deadbolts; key-in-knob cylinders; mortise and rim cylinders; cam, switch and push locks, as well as padlocks.

Abloy's product line increased when the company acquired the AWI product line in April 1990. Included in the line are the AWI TM Solid Bar Brass Cylinder; the Convert-A-Lock TM, a key-in-knob cylinders; File Guard, file cabinet locking bars, and Welch TM mortise deadlocks.

Recently there has been significant management changes at Abloy Security, Inc.. The current president is Peter E. Wilson; J. Flynn is director of business development; Gary Deckert is manager of engineering and Ted Hyde is the new plant manager.

Abloy Security Inc. is a member of Abloy Security Group, a world-wide

leader in security hardware.

American Lock Company

In 1912, following his arrival from Hungary, John Junkunc worked as a railroad machinist in Boise, Idaho. As a natural mechanic and inventor, he designed and built a number of small tools which were used to make his work a little easier. One of these small inventions was a keyless (combination) padlock which he invented out of necessity because he was constantly misplacing keys for the regular padlocks used on the job.

Fellow workers were so fascinated with this unique keyless padlock, that the young inventor devoted most of his spare time to filling orders for his new padlock. Eventually, he gave up his regular job with the railroad and worked full-time manufacturing combination padlocks.

As a result of the popularity of the combination padlock invention, John and his family moved to Chicago where he began a manufacturing operation in the expanded basement of his family home. In 1919, the company moved to larger facilities and acquired the American Lock Company, a

manufacturer of cylinders. More inventions followed, most notably the now famous double ball-locking mechanism, which is recommended by the National Crime Prevention Institute. Its design has become standard equipment on most security padlocks on the market today. Hardened shackles and solid extruded brass padlocks were also introduced. After moving to one final location on Chicago's south side, the rapidly growing company settled into its permanent home in Crete, Illinois, 30 miles southwest of Chicago, in the early 1960s.

Throughout the years, American Lock Company added innovative products and packaging used in the security industry, including five, six and seven pin tumbler padlocks, shackleless locks (Series 2000), and the 747 shrouded shackle padlock. The solid steel Model 700 continues to be the flagship padlock.

Because of its progressive involvement in the industry and constant monitoring of current market trends, American Lock continues to introduce new products into the 1990s. The new products include a Multi-Cylinder system, built to upgrade existing interchangeable cylinder

American Lock Company

Continued from page 31

padlocks, the 20 and 40 series solid brass padlock, a Safety Lock-Out system providing color coded aluminum body padlocks for easy identification, and most recently, Weatherbuilt Plus for maximum out door security.

Whenever a need is identified, American Lock's experts apply their technical knowledge to its solutions.

Arrow Lock Company

Arrow Lock manufactures a broad range of locks and accessories, door closers, exit devices and alarms for commercial, institutional and industrial construction.

Mortise locks and cylindrical locks are available in heavy duty and standard models and are designed for use in schools, hospitals and commercial buildings where security, durability and low maintenance are required. Arrow products are engineered for strength and performance, and are precisely manufactured to exacting standards. There are a variety of related knob and

lever designs and functions. Auxiliary locks are obtainable in extra heavy-duty deadlock, heavy-duty deadlock and mortise deadlock.

Three series of door closers are manufactured to fit regular, top, jamb and parallel arm applications. All three series feature adaptable door control and rugged construction, with fully adjustable backcheck feature with separate backcheck valve and a limited five-year warranty.

Arrow exhibits a full line of exit and fire exit devices ranging from sleek, low-profile touchbar for standard and narrow style applications to the traditional crossbar.

Exit devices are manufactured for doors 24" to 48" wide, are U.L. listed for life safety and are non-handed. To complement the exit device line, Arrow offers a stand-alone alarm, an exit alarm by paddle and exit alarm by push bar, which is available with an UL label for three hour fire doors. All three alarms are powered by a 9V battery.

All Arrow products are designed to accept the interchangeable core (I.C.) option, and provide flexibility and convenience combined with the highest level of security. It allows quick, easy combination changing when the security of a system has been breached

and is designed to fit cylindrical locks, ANSI grades 1 and 2; deadlocks, tubular and mortise, ANSI grade 1; mortise locks, ANSI grade 1; cylinders in both mortise and rim type and padlocks.

Customers can select from a full line of tools and service equipment which includes a portable key combinator, keying kits containing all parts needed to combine Arrow interchangeable cores or standard cylinders, and a mortise cylinder cam assembly tool and the core capping machine which caps all 6 or 7 pin cores. Replacement cylinder packs are available in a multitude of competitive keyways for use with cylindrical locks and deadlocks. Each pack contains one brass cylinder, two brass key blanks 5 pin, one plug removal tool and appropriate tailpieces.

Auto Security Products

Before 1980, locksmiths who serviced Japanese and European vehicles were out of luck when it came to the availability of replacement parts. If a complete lock was needed, the choices were the car dealer or a



**HPC has it all:
Key Machines, Software, Books, Car
Openers, Pick Sets, Tools, Door Guards,
and Key Cabinets**

[Click here for more information](#)

wrecking yard, and service parts such as face caps, replacement tumblers and springs were simply not available.

As the sales of imported vehicles increased in the 1970's because of the increased importance of fuel economy, the American locksmith was to some degree shut out of the market for servicing these cars because the service parts were so difficult to obtain.

While service parts for American car locks have been readily available since the 1930's the 1970's locksmith needed more. In September 1980, the locksmith got what he needed when Auto Security Products opened for business.

Although in the beginning, the Auto Security Products line consisted of only about one hundred part numbers, it was more than had ever before been available to the locksmith. But every year the line was expanded and improved as much as possible, and by the end of the decade, the line consisted of almost 1,000 part numbers. Several factors have contributed to the success of Auto Security Products, but the things which probably contributed the most are attentiveness to the marketplace and support of the locksmith supply distributors.

Auto Security Products has always endeavored to keep informed about

changes in the market so that the best possible selection of parts are always available to the locksmith. While some of the parts in the ASP line might sell only a few pieces each year, in a job situation, such a part is just as important as a part used every day. Unfortunately, for various reasons there are some parts which ASP cannot supply, but there are very few imported vehicles for which ASP can supply no parts at all.

The locksmith supply distributor also deserves a lot of credit for the success of Auto Security Products. Knowing that a single distribution center could not properly service a market the size of the United States, Auto Security Products made the commitment from the beginning to sell only through distributors. This commitment encouraged the distributors to support the line better, since ASP was their supplier, not their competitor.

Auto Security Products has also developed various levels of stocking programs to insure that each distributor has the most popular items in stock for immediate delivery to the locksmiths. A distributor must stock at least the approximately 150 most popular items in order to be listed as a stocking distributor. Over 70 distributors across

the nation are ASP stocking distributors, with some stocking every part number supplied by Auto Security Products.

In 1984, when Ford Motor Company began changing the locks on their American built cars from the traditional pin tumbler locks to the 10-wafer tumbler locks, the locksmith was again out of luck as Ford made no provisions for these parts to be made available to the locksmith except through Ford dealers.

The locksmith was again faced with a situation where he needed more than what was available, and again Auto Security Products was the company that provided the locksmith with more.

Original Ford 10-wafer tumbler sidebar ignition locks are now available in the ASP line. A complete range of door lock service parts was also made available by ASP, including rekeying kits for both the original 10-wafer door locks and the new style locks used on some 1991 Ford products. Other important 10-wafer Ford door lock parts provided by ASP are uncoded plugs, dust cover and shutter assemblies, plastic tailpieces and 13 different face caps.

The 10-wafer tumbler Ford door lock face caps presented an interesting



**LOCKMASTERS
SECURITY
MANAGEMENT**

TM

*Click here
for more
information*

**Providing quality
tools, parts, and
service for
the security
professional.**

Auto Security Products

Continued from page 33

problem because the same style of caps used in the Taurus, Sable, Tempo, Topaz, Thunderbird and Cougar are made of plastic and molded onto the locks. Since most locksmiths do not have the equipment needed to mold a plastic cap onto the lock body, the caps had to be designed so that a locksmith could install them with normal hand tools.

The problem was solved by designing the caps with a metal insert at the rear so that a plastic cap can be firmly secured to the lock body by metal tabs just like an all-metal cap. Although the metal inserts increased the cost of the caps, the extra cost is much cheaper than the risk of an all-plastic cap falling off while the customer is driving down the road.

Contrary to some locksmiths' beliefs, Auto Security Products does not manufacture the part it sells. Parts are obtained from over 30 factories around the world, most of which supply vehicle manufacturers on an OEM basis. The product is limited by what is being supplied by the car manufacturers.

Detex Corporation

Detex Corporation manufactures and markets a complete line of door security hardware, electronic access control systems, watchlocks, electronic watchtour systems and personal alert safety systems.

Locksmiths know Detex best for products that effectively control access and permit emergency egress. Detex entered the hardware market in 1963 by introducing its first exit control lock (ECL). This type of device combines the traditional panic bar assembly with a high decibel alarm, while the alarm mechanism can be disarmed or silenced only by an authorized control key.

By 1964, the company established a nationwide network of hardware distributors and sold its first 1,000 ECLs. Currently, many of the company's security hardware products are in-service throughout the world, in commercial, industrial, office, lodging, hospital, school, institutional and government facilities.

The current ECL-230C Exit Control Lock incorporates a range of enhancements and options, including

self-latching units that lock upon closing, time delay programs that permit limited egress without alarm, and multilingual and braille notice plates.

The full line of Detex security hardware products represents over 25 years of feedback from locksmiths in the field. Solutions are available for installation on narrow doors or frames, and outswinging double doors in flush or surface mount configurations.

The EA-500 (battery powered) and EA-2500 (AC powered) exit alarms feature an aesthetic slim-line design that complements any interior treatment. The exit alarms are actuated by magnetic door switches and are typically used in internal security door applications where panic bars are not required.

For centralized monitoring, Detex offers a line of remote indicating panels, which alert management to unauthorized entry/exit from any control equipped door in a building.

A logical out growth of its egress control expertise, Detex entered the electronic access control market with its first magnetic card reader in 1968. The popular Dentco R access control systems utilize card readers and/or keypad entry control, and the products are ideal for locksmiths adding electronic security to their traditional offerings.

Since 1923, Detex has set the industry standard for mechanical watchlock systems with its Newman and Guardsman watchlocks recording guard's tours in facilities around the world for decades.

Detex introduced the first computer-based electronic watchtour system in 1985 that dramatically expanded information handling and reporting capabilities. In August 1990, the company entered an agreement with Guard Control Systems, Inc., to market the Detex/GCS Patrol Manager TM series, a next generation electronic watchman's tour system and incident recorder, with asset management capabilities.

Detex also manufactures the PAL III and PAL 5 Personal Alert Safety Systems (PASS) used by fire fighters and workers in hazardous environments. A PAL system sounds an alarm if the wearer becomes motionless or disabled for more than 30 seconds.

DynaLock Corporation



The DynaLock philosophy of producing quality products and promising next day delivery helped DynaLock Corporation gain recognition in the very competitive locksmith industry. This philosophy permeates the entire DynaLock product line of electromagnetic lock, deadbolts, power supplies, keyswitches and controls, allowing DynaLock to bring a high quality product to the consumer.

DynaLock's 3000 Series magnetic locks have set the benchmark for lock design in the 1990's by being the first to introduce a field selectable multi-voltage coil in a one-piece housing, with concealed mounting via the integral slide tack. The Series may also be converted from out to inswing door mounting and can change hand to match the door hand. It also accepts AC input voltage at no extra cost.

The UL Listed 3000 Series magnetic lock has been tested by an independent laboratory and certified to exert 1500 pounds of force. It has also been tested by access control equipment manufacturers and was verified not to cause damage due to line spikes.

The product philosophy is evident in the 5000 Series power supply because it has a selectable voltage output, selectable fire alarm tie-in, and a choice of control contacts and dual voltage battery back-up output.

DynaLock expands its electromagnetic locks line to include the low-cost 2000 Series that exerts 1200 pounds of force. It is a good compromise of price and performance without some of the complications that may arise with the imported locks.

Fort Knox

For almost 50 years, Tom James, the owner of Fort Knox, has practiced the security and safety principle in homes, cars, work places and recreation areas. In 1977, he lost a 15 year old son who was accidentally killed by a CO2 cartridge loaded with black power Fort

Fort Knox

Continued from page 34

designed to be a toy by his friends.

In the early years of our country, almost every home had a safe or other secure area to keep valuables. Today is no different, with the high burglary rates, dope, unemployment, inflation and other problems. Homes cars and recreational areas are under constant attack by unscrupulous people wanting the property.

Citizens must lock or lose. There is

no alternative and the sooner the property is secured, the better chances are it won't get broken into.

The name Fort Knox has always been synonymous with security, safety and quality. It has been a leader in design and quality since the company began.

Gardall Safe Corporation

Syracuse, New York has always been the home of Gardall Safe Corporation. In the late 1940's, Henry

Bluestone, the founder of Gardall, was a salesman for Mosler Safe Company. Mosler decided to close its manufacturing operation in Syracuse and move all manufacturing to Hamilton, Ohio, and Henry not wanting to move to Ohio, decided in 1950 to start Gardall Safe Corporation along with the assistance of George Bloch. Henry's responsibility was sales and marketing while George was responsible for manufacturing. As expected, the insulated safes that Gardall produced at that time looked similar to the Mosler insulated safe.

The business steadily progressed and under the economic pressure of expanding the business, Henry decided to sell Gardall Safe Corporation to Adolph Falso and Falso's sons in 1970. Henry stayed on as sales manager.

The Falso's background comprised of manufacturing heating, ventilation and air conditioning products, along with sheet metal fabrication. This background proved to be very helpful in improving the construction quality of the safe line, and under the Falso management, the company continued to grow.

Adolph Falso became very involved with the company in 1978, making many innovative changes to the insulated line and adding new safes to the product line. Gardall Corporation continued to focus on a small line of premium quality safes for home and business use.

Gardall's ownership changed for the third time in 36 years during July 1986. The new owners are David Patton and Edward Baroody. As was true with the Falso, the new owners are dedicated to continuing the Gardall tradition of manufacturing premium quality safes with strong construction and hand-made extras that are not available on imported safes.

Gardall sells and distributes its products through a strong network of stocking distributors. This program was designed to make it easier for locksmiths or safe dealers to get products faster, at a more competitive price, and with reduced and sometimes eliminated freight costs.

Gardall Safe Corporation manufactures a full line of insulated safes which are constructed of materials which make them heavier and stronger than other competitive products. Their small and medium-size insulated safes have the UL one hour 350 degree label. The larger insulated safes have a factory tested two hour 350 degree



**Every Installation
Is a Self-Portrait
Of the Person Who Did It.
Autograph Your Work
with Excellence.**

[Click here for more information](#)

Gardall Safe Corp.

Continued from page 36
label.

Gardall's unique "Z" series safe is an insulated safe with a "B" rated burglary construction money chest welded inside its interior. The company still continues to manufacture a high quality line of rotary and front loading depository safes, floor safes and wall safes.

Gardall recently designed the "In-Floor Safe" line, with an aim at producing a quality unit at a more competitive price. They also added key and combination safe doors that will interchange with each other as well as most other safes in the burglary line. The interchangeable doors will make it easier to remove a door, in case repair is necessary, or for interchanging a key for a combination operation on any burglary safe in stock. All Gardall safes are equipped with Sargent and Greenleaf locks, dials and dial rings.

Gardall recently moved its factory and offices to a new location. Though still located in Syracuse, their new state-of-the-art facility has 60,000 square feet, which is twice as much manufacturing space as before. The

new facility has an improved material flow which gives Gardall the opportunity to increase its productivity and expand its product line.

Hirsch Electronics Corporation

Hirsch Electronics offers locksmiths the opportunity to service its industrial, commercial and institutional customers with a line of Digital Security Systems™ which are simple to use, easy to sell, and very flexible for solving a wide range of door control applications. Many experts consider this to be the most secure system of its type.

The 1981 opening of the company was based on the invention of The ScramblePad R, a patented electronic keypad. Locksmiths, architects, owners and security managers quickly heard of the new product and began knocking on Hirsch's door to learn more. Hirsch responded to the interest by developing several basic access control systems to satisfy the demand for a secure keypad based entry control.

It became obvious that there was great potential for a unique product line to be developed which could solve an

owner's access problems, build in a door monitoring capability, and include all the necessary parts to make installation and usage easy.

At the same time, the company began to attract seasoned experts from the door hardware industry as well as the electronic security system's industry. Specs were written for the engineering department for three system designs. Developed first was an industrial strength, ultra reliable, eight door access control system called the Model 8 and a Model 2 companion product followed for smaller, one or two door applications. The third product designed was a modern-day, scrambling cipher lock.

This product was the ScrambleLock™ family of simple systems that helped any locksmith get to know Hirsch. It also introduced valued customers who had experience with other less up-to-date keypad systems to the most current model. In many cases, this had led to more sales of Model 2 and Model 7 systems for these locksmiths.

Early on, Hirsch realized that manufacturing competent systems did not guarantee successful sales to the installers of access control systems or to end-users, so Hirsch committed itself to

medeco®
HIGH SECURITY LOCKS

**Integrity. Ingenuity....
security solutions.**

[Click here for more information](#)

Hirsch Electronics

Continued from page 38

making both the purchase and use of their systems as easy as possible.

The first step of this process was to create factory training classes introducing both installers and owners to its products, including installation and service procedures, along with directions on how to program products to take advantage of the many included features. These classes are held regularly at the Hirsch factory in Irvine, California and at various times in the locksmith field, with attendees earning a Factory Certificate of completion.

The second step in the process was to establish nationwide distribution to make the product quickly and conveniently available. Distributors are established in the locksmith, builders hardware and alarm system trades to best serve each marketplace.

The future holds more innovative, industry leading products and systems from Hirsch. Digital Security Systems have jumped to the front when it comes to customer preference because the systems are easier to work with, offer more functions, are more secure, and often satisfy the end-user the majority of the time. They are virtually

obsolescence-free and are cost-free to operate. This means repeat business and great references to spread the good word about your company's security sales and installation skills.

HPC, Inc.

HPC is a family owned and operated business whose product line developed in 1934. Incorporated in 1956, HPC has a commitment to the industry based on two ideals: dedication to unsurpassed quality of its products and the guaranteed satisfaction of its customers. This philosophy has proved to be the cornerstone of HPC.

HPC specializes in manufacturing products for industrial, office, automotive and security markets. These products include a wide array of key duplication machines, plus the famous 1200CM code cutting machine, used world-wide, designed with masterkeying in mind.

The company also manufactures a complete line of security key control systems including metal key cabinets (Kekab) for both key control and key security (ranging in capacity from eight to 730 keys in either a one or two tag system), specialized security cabinets (Chm Kab and Medi Kab), Key Control

racks and Key Keeper boxes.

HPC also manufactures an extensive line of door hardware and guard plates designed to protect all types of doors and door locks from unauthorized forced entry. It offers a wide selection of locksmith shop tools, picks and pick sets, car openers and other related products. Everything from pins and springs to precision micrometers and assembly tools are available through an authorized HPC distributor.

HPC is a major publisher of technical manuals, a quarterly publication, textbooks and leads the industry with up-to-date code books and code referencing material. The code books provide over 9000 pages (over 12 books) of lock codes and lock code information from around the world in the most popular format of 8-1/2" x 11".

HPC Soft, the software division of HPC, produces standard-setting software programs for the industry in code management, standard masterkeying, removable code masterkeying, key blank cross referencing and key control record keeping. HPC Soft provides software solutions for 80 percent of the computers used by locksmiths nationwide.

medeco[®]
HIGH SECURITY LOCKS

**The market leader
in locking systems for security,
safety, and control.**

[Click here for more information](#)

HPC and Triton College co-sponsor accredited courses in basic and advance locksmithing. The HPC Learning Center facilities contain state-of-the-art key machines, audio-visual equipment and a model locksmith shop. Classes feature in-depth lectures with exploded view transparencies and extensive hands-on training using some of the finest machines and tools made. The opportunity for voluntary apprenticeship in a working locksmith shop is provided for students taking these courses.

The HPC Services Division is devoted exclusively to the HPC customer. Through a toll-free 800 number, HPC Services can answer particular questions, help with repairs or needed parts, give technical advice, or help solve specific problems.

Kustom Key

In June 1972, a small, modest company emerged with an innovative idea to provide large bow-high quality key blanks to the lodging industry, thus eliminating the need for key tags. These precision manufactured, attractive key blanks would also enhance the image of the hotel.

Today, Kustom Key, Inc. is one of the largest manufacturers and direct suppliers of large bow, neuter bow, and mid-sized key blanks to the lodging and professional locksmith industries. All are available in over 500 popular keyways of either quality brass or nickel-silver. The large bow blanks are available in a variety of shapes and optional custom embossing. Neuter bow and mid-sized blanks are also available with optional security conscious incising.

When asked about the company's growth over the years, Mike Vedder, General Manager replied, "When my Dad, Dave Vedder, started the company, it was located in Los Angeles in a 500 square foot facility. Today we occupy 12,000 square feet in Lake Havasu City, Arizona. Growth is wonderful, but when my father took me on board in 1982, he said, 'Don't ever forget to take excellent care of every single customer, regardless of the size of their operation. Give them the respect they deserve as professional tradesmen. Our success is due to their loyalty.' " Mike applies this principle to the daily operations of Kustom Key, Inc.

Kustom Key has not only established its success by offering quality products and fair pricing, but

also has progressive customer service. Toll free order lines, fax machines, along with shipping stock orders within 24 hours, all assist in offering the locksmith dependable service.

Kwikset

In 1945, a boom of pent-up customer demand reverberated across the nation, and the sound of success came through loud and clear to Adolf Schoepe and Karl Rhinehart. The two entrepreneurs watched new houses being rapidly built and realized that they literally stood at the doorway to opportunity.

Schoepe and Rhinehart bought a small lock-manufacturing company in South Gate, a Los Angeles suburb, and renamed their enterprise Gateway Manufacturing. Their hopes revolved around a new type of door lock they had developed. It was one they knew was superior to the old-fashioned mortise lock, which was inefficient, difficult and time-consuming to install.

The Gateway Company's tubular lock design had only three components: lock, spindle and latch. The lock was easier and faster to install, but, Schoepe and Rhinehart soon learned the disadvantages of being the new kids on the blocks. The long-established

NATIONAL AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

www.laserkey.com



Choose S&G Comptronic
electronic safe
locks for...security...
technology...tradition.

[Click here for more information](#)

Kwikset

Continued from page 41

competitors promoting their outmoded but accepted mortise and cylinder locks, made it very difficult to become established in the retail hardware market.

The key to the future lay in the huge new housing developments that were fast becoming the trademark of American living. Instead of putting up only five or six houses at a time, residential builders were now mass-producing communities of 500, 600 or 1,000 homes. With seven or eight locks needed for each house, builders had to install at least 4,000 locks per tract, and that's where the quick installation of Gateway's locks paid off. Labor saved was profit earned.

Schoepe and Rhinehart named their new lock Kwikset, to underscore its installation speed, and soon, the company name changed to Kwikset.

In 1946, Kwikset sales reached \$500,000 and sales were growing. By 1948, the company and its expanding work force of 200 moved to a modern new plant in Anaheim, about 30 miles southeast. In 1956, Kwikset became very well known in the locksmith industry.

Currently, approximately 1,500 employees work around the clock at three facilities to meet the increasing demand for Kwikset products. The company merged with American Hardware Corporation (AHC) in 1957, and became the industry pace-setter, with its Corbin and Russwin divisions a leader in commercial and industrial locks and the new Kwikset division driving the residential market.

The next major corporate advance came in 1964, when AHC and Emhart Manufacturing became the new Emhart Corporation. The billion-dollar, multinational producer of industrial and consumer products and informational and electronic systems was recently acquired by Black & Decker, with Kwikset as one of the most important corporate entities.

Kwikset made another leap forward by becoming the distributor in the United States, Canada and Mexico for Valli & Colombo, one of the world's most respected makers of designer hardware for the upscale consumer market.

"This significant development gives Kwikset the opportunity to move aggressively into the rapidly growing designer hardware market," said Steve Price, vice president of marketing for

Kwikset. He noted that the designer hardware segment of the door hardware market is a fast-expanding market that holds a vast potential for the future.

Lockmasters

In the early 1950's, Harry C. Miller, president of Sargent & Greenleaf, Inc., developed a class to teach safe lock manipulation with James L. Taylor, an expert manipulator, selected to teach the course. The class ran five days, at 10 to 12 hours a day. People travelled from different parts of the country to learn manipulation. The demand for the class continued to grow and the decision was made to hold the classes in various cities around the country. Eventually the travel load became too demanding for the instructors so they decided to explore new and more efficient ways to provide the locksmith industry with a manipulation course.

Harry Miller and Jim Taylor conferred with home study experts to find out if manipulation could be taught in a practical, step-by-step correspondence format. Encouraged by the results of their meetings, Jim and his wife Alice compiled the course into a manual form. After developing the manual, it was then submitted to the



SCHWAB CORP.

Fire protection for your vital records.

Free freight!!
No middle man!!

[Click here for more information](#)

Lockmasters

Continued from page 42

New York State Board of Education, where it received full approval. A special organization was then created using the Lockmasters name. Lockmasters would carry a state license as an approved correspondence school.

Jim and Alice faced many challenges in developing the school. One of their biggest obstacles was the insertion of a "good character clause" in the enrollment application which restricted the training to locksmiths and government employees. The State Board of Education eventually approved the proposal, and in July 1957, the school began the first advertising campaign for the newly developed Safe Manipulation and Safe Lock Servicing correspondence courses.

For the first 15 years of business, the company operated in the basement of Jim Taylor's home. In November 1970, Lockmasters moved to the Clover Park Professional Building, and after the move, Jim Taylor hired Richard Van Veen to manage the operation and develop new courses.

Lockmasters designed an in-house

resident seminar called the Security Specialist Seminar. The school also received Veteran's Administration approval for military personnel who wished to take the courses. In 1972, Rex Parmelee, Sargent and Greenleaf's government sales manager, became Direction of Operations for Lockmasters.

The Tool and Equipment Division of Lockmasters began when the company decided to advertise a borescope in June 1973, and in August 1973, the company moved to Satellite Beach, Florida. Once the company moved, Jim Taylor decided to sell his interest in the company to his partner Harry.

In the Satellite Beach facility, Lockmasters continued to provide resident and correspondence training. The resident courses offered were safe lock servicing, safe manipulation, safe penetration, and the newly developed safe deposit servicing course. The correspondence courses remained the same until late 1976 when the safe deposit servicing course was introduced.

Harry's oldest son Clayton, the president of Sargent and Greenleaf, expressed an interest in purchasing Lockmasters, and in 1981, Clay

resigned from Sargent and Greenleaf and purchased Lockmasters. After evaluating the company and its growth potential, he decided to put Lockmasters training classes on the road, making it more convenient for the locksmith to attend the popular resident training school. In 1982, the company then moved to Nicholasville, Kentucky, which caused some personnel changes leaving Lockmasters with five employees.

While teaching the different courses that Lockmasters had to offer, Clay saw a great need for the improvement and development of new safe and vault tools for the industry. The first official Lockmasters tool catalog was produced and mailed to locksmiths and safe technicians across the country in the summer of 1982.

The main focus of the company was to continue to provide the best training available to the industry and to meet the growing need for safe tools and equipment. Lockmasters moved to a larger facility in 1983, where the company is presently located. After the move, Wesley Day and Scott Reed were hired to manage and direct the growing tool and equipment division's sales department, which was the first attempt

SRI
SECURITY
RESOURCES INC.

**SRI and Tech Train Productions are
the automotive specialists - your best
source for automotive tools,
manuals, and videos.**

[Click here for more information](#)

Lockmasters

Continued from page 44

to actually focus on the marketing of tools and equipment. The success of the tool division has continued and is now the pace setter for the safe and vault industry.

Lockmasters developed two new courses in 1987, which expanded their curriculum. The first was a five day government security container training course covering the servicing and forced entry of GSA containers. The second class was a 14-day professional locksmithing course which covered the service and maintenance of large institutional key lock systems. Both courses were designed for locksmiths and government personnel, needing to understand and maintain the physical security systems within institutions and government facilities.

Mark Miller and Wesley Day continued to develop and manage the tool and equipment division until December 1989, when Wesley accepted the Director of Education position, and Mark continued with tool division management.

The education division has taken on a more aggressive approach to the education of the industry and is now

developing several new classes to be introduced in the future. Wes has dedicated the upcoming year to bringing locksmiths a new and more extensive weekend seminar program to cities across the country, more new resident training programs, and improved correspondence training courses.

The company has grown from a small two-person business, operating on a part-time basis in Rochester, New York, to a company now employing over 22 individuals and remains, after 35 years, dedicated to helping the development of the industry.

Locknetics Security Engineering

Locknetics Security Engineering, a division of the Harrow Products group, is a leading designer and manufacturer of electromagnetic locking systems and access control components. In 1982, Harrow Products acquired Locknetics and later, in 1988, purchased Security Engineering. They draw from a 17 year legacy of innovation design, quality manufacturing and a commitment to product support for product in place.

Locknetics' product innovation continues to set the standards in life

safety and security. Their new generation of products is designed to meet the demands of the increasingly sophisticated electronic security industry. The August 1990 introduction of the 390 Series direct pull magnet features on-board electronics and 1500 pounds of holding force. The new 280 Series shear lock offers a concealed, compact application with 2700 pounds of holding force. The new improved 400 Series solenoid lock products provide a complete family of 33 solenoid products and accessories.

The broad Locknetics product line, which offers electromagnetic locks, electromechanical locks, solenoid locks, power supplies, station controls and consoles provides an excellent growth opportunity for the locksmith trade.

Locknetics' product development has focused on providing solutions to security/access control problems through the application of today's latest electronic techniques. To simplify the solution of tough problems, dual voltage products adapt to 12 or 24 volt systems. On board options including time delay, door status monitor and magnetic bond sensing, allow you to customize each installation on site. Optional features are factory installed with no special mounting or auxiliary



STRATTEC™

***The world's largest producer of
automotive locks and keys.***

[Click here for more information](#)

Locknetics Security

Continued from page 46

boxes required. Ease of installation is aided by thorough instructions. Additional monitoring signals and delays are offered for system application and expansion.

Locknetics' electronic security locking systems are ideal for new construction and retrofit. Each component is shipped complete with mounting templates and hardware, making installation on any style of door frame quick and easy.

Particularly noteworthy, is the ability of Locknetics products to adapt and retrofit existing doors when your customer's new security perimeters are drawn. Difficult cutting of the frame is eliminated when electromagnetic locks are selected for door security hardware. Power supply and accessory components are available to round out the package of individual or multi-door systems. All of Locknetics' products are designed, engineered and manufactured at the company's headquarters in Forestville, Connecticut.

The new product introductions and directions are headed by an aggressive new management team led by President James J. Scott, P.E. Locknetics is committed to foster the growth of electronic security products through education, training, research, development, advertising and promotion. George Nortonen, vice president of marketing and sales and George Frolov, engineering manager, have extensive experience in the security industry...their guidance and support are keys in the new Locknetics plan. Production management and manufacturing engineers have streamlined in-plant operations. Automated processes include computer numerically controlled machining, robotic welding and sophisticated testing methods.

All of these items are essential in providing a superior product for Locknetics' key element...the locksmith dealer. Your regional Locknetics locksmith wholesale distributor is prepared to help you participate in one of the fastest growth segments of the security industry.

Marks Hardware USA

Marks USA, established in 1977 to serve the growing demand for a mortise

lock manufacturing company, meets the needs of an expanding market.

Since 1977, the product line has expanded to include residential and commercial locksets meeting and exceeding the most stringent UL and ANSI specifications. Today's products include mortise, cylindrical and tubular locksets, security storm door locksets and locks for woven wire gate.

Marks mortise locks are available in 2-1/2" and 2-3/4" backsets with several choices of lever, knob or handle trim. Their locksets feature thru-bolted trim with screwless knobs and/or levers, and have been engineered to simplify installation, reduce maintenance and eliminate traditional design problems of mortise locksets.

Tubular locksets are offered in 2-3/8" and 2-3/4" backsets to coordinate with the designer series of mortise locksets. This allows each lockset design to be carried through from exterior to interior.

The Marks cylindrical locksets are unique with a heavy construction and are regarded to be one of the best in the lock industry. ANSI Grade 1 and Grade 2 Series are offered with standard cylinders, in addition to removable core models in 2-3/8" and 2-3/4" backsets.

George Marks, founder and president, holds a Bachelor's degree in mechanical engineering and a Master's degree in business administration. He is also the author of several patents of products now in production at the company.

In 1989, the Customer Lockset division was created to accommodate customers with special requirements for either lock function or design. Since then, locksets have been developed for the New York City Board of Education, Housing Authority and Department of HPD; a large suburban condo development; a major New York City high-rise builder and others. The custom division welcomes the challenge of these special applications.

The marketing of Marks' products is through sales representatives. They sell to wholesale locksmith distributors, contract hardware distributors and door manufacturers, and the normal delivery time of standard catalog products is four to six weeks.

McGunn Safe Company

The McGunn Safe Company, a family owned and operated business, has been designing and building safes

and vaults on a national and international basis since 1940.

Ed McGunn, the company's chairman, is respected nationwide for his knowledge of security and is often consulted on police and FBI investigations. Ed recently authored a book entitled *How To Avoid Robbery, Burglary & Violence* and is currently working on a second book which will discuss the responsibility involved in selling safes and security.

McGunn Safe Company has built safes for such prestigious customers as the United States Post Office, the Army, and the Navy. McGunn's corporate customer list includes some of the top companies in their fields: Amoco, United Airlines, B.J. Wholesale Clubs, Walden Books and Blockbuster Video. Other McGunn clients include jewelers, armored car companies, nuclear laboratories, and gold and silver smelters.

McGunn has factories in California and Chicago, where there is also a fully stocked warehouse. The safes are sold through a network of over 2400 independent dealers in the United States. The company also exports to many other countries including Canada and Australia.

A full service provider, McGunn does not just sell safes. The company seeks to educate all walks of industry on the proper application of safes. McGunn will perform a confidential needs analysis to fully understand and solve each client's particular security problems. Vital questions are answered before the purchase is made.

McGunn's concept of product design includes careful consideration of customers' needs and risks. The standard product line has 65 models offering fire, burglary, armed robbery and employee theft protection.

Several years ago, realizing that retail stores have a greater risk in armed robbery as opposed to burglary, McGunn introduced drop safes that were designed to reduce armed robbery when correctly used. Further reductions were realized when time delay locks were added. The results of initial studies exceeded even McGunn's expectations. In a controlled study with Domino's Pizza, armed robberies were reduced by 90 percent.

Additional studies led McGunn to understand that an even greater loss to retailers was being caused by employee theft. The McGunn Cash Handler with color coded drawers was designed to help eliminate the problem by McGunn

McGunn Safe

Continued from page 48

separating and identifying drops from different employees. The idea was simple and effective. McGunn was awarded U.S. patent #4,922,837 for the design and concept of this product.

Research and development is an ongoing job at McGunn Safe Company. New products will soon be released to meet customer needs for electronic locking and monitoring of transactions, cash dispensing and extra burglary protection. In addition, McGunn will soon introduce a small electronic safe for homes.

Omnia Industries

Omnia Industries, Inc. was founded 26 years ago with the intention of bringing to the American market a new concept of upgraded decorative hardware at moderate prices, and since 1964, Omnia Industries has supplied the industry with architectural hardware that is elegantly designed, yet consummately functional.

As manufacturers of decorative door hardware, architectural trim, solid brass

bath accessories and cabinet hardware, Omnia responds to the market's demand for elements of classical elegance to help create a place of its own in the decorative hardware industry. Backed by product innovation and a commitment to personalized customer service, Omnia has become a name recognized for excellence among architects and project designers.

Omnia products are manufactured from the finest brass materials, with special attention given to the finishing process for each piece. The hand polishing of each product creates a mirror-like US3 finish, which is then protected to resist tarnishing by a baked-on transparent lacquer. A great importance is also given to customer service. Omnia has built a reputation in the industry for quick product deliveries, the extent that most items are shipped within three to 12 days.

As a major manufacturer of distinctive brass hardware, Omnia has, over the years, widened its product line to include interior tubular latchsets, narrow plate latchsets, mortise locks, narrow backset locks and deadbolt locksets. Among the featured products in the Omnia line, the deadbolt series includes deadbolts with 1" projection,

built-in maximum security with flush cylinders, and an excellent selection of decorative trim to enhance any entrance. An attractive aspect for the locksmiths and builders is a moderate pricing structure and ease of installation for this product line.

The narrow backset locks provide high security and classic styling for patio, French style or entry doors. Two backsets are available in this line: 1-3/8" and the very popular 2" backset. Several functions are available and all are complimented by a wide selection of contemporary and traditional levers.

The emphasis that has been placed on the combination of durability, security and design, makes Omnia's mortise lockset program an ideal product for any residential or commercial installation. The mortise lock line has a UL Listed mechanism of the highest standards. All functions are available and offered with attractive Omnia trim.

The Omnia interior tubular latchsets with brass trim have become a standard in the industry in the last 20 years. From the very beginning, they were designed to fit a standard 2-1/8" bore. The internationally-patented latches are available with 50 trim designs of levers



***ASP - Your Auto Service
Center for the World***

[Click here for more information](#)

Omnia

Continued from page 50

and knobs, some of which incorporate in addition to brass, marble and fine porcelain.

In recent years, Omnia accomplished a number of significant product improvements to this already outstanding line by introducing concealed screw roses for passage and privacy sets, and a reversible latchbolt with a 1/2" throw. The new privacy rose sets offer a strengthened locking block and self-aligning installation, together with a greater ease of operation.

For lever latchsets, Omnia produces a strong torque spring for smooth return action, even with the heaviest solid brass levers; a pitched hub for sag-resistant levers, and a thru-bolting system for privacy installations.

The lockset lines are complemented by an extensive selection of door and furniture trim, including door knockers, numbers, door pulls, switchplates, coat hooks, and cabinet knobs and pulls.

The five series of solid brass bath accessories have been recently expanded by four new series which include the streamlined Park Avenue, Montclair and Milano series, attractively priced at a level that will

make these products demanded by builders and those installers who are price-conscious.

The company's president, Alberto Comini, says he sees continual growth in the demand for quality decorative hardware, a niche market that has evolved over the past 25 years during which locksmiths, architects and builders have demonstrated the value of high-end construction and renovation. In the meantime, Alberto Comini says the company's intention is to continue to provide quality door hardware and accessories at competitive prices.

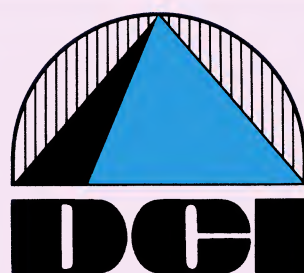
Sargent & Greenleaf

The area surrounding Lexington, Kentucky is internationally known for producing some of the finest thoroughbreds and quarter horses in the world, but for those in the security business, no trip to Kentucky would be complete without a visit to Sargent & Greenleaf. A ten mile drive south from Lexington through the gently rolling hills of the Bluegrass region leads to Nicholasville, a city with rich southern traditions and warm, friendly people. This small city is also home to Sargent & Greenleaf.



S&G traces its history back to 1857, when locksmith and inventor James Sargent was working as a salesman for Yale and Greenleaf Company, located in Shelburne Falls, Massachusetts. To demonstrate the superiority of his employer's locks, James Sargent mastered the science of lock picking, and he soon became so proficient that even the highly respected Yale locks yielded to his techniques.

Recognizing the vulnerabilities of contemporary locking devices, Mr. Sargent developed a combination lock that he could not defeat himself. This mechanism, the Sargent Magnetic Bank Lock, was marketed under the name "James Sargent, Lock Manufacturer." The United States Treasury Department decided to use it, which brought immediate prestige and success to this first effort.



***We have it all.
Quality, Value,
& Service.***

[Click here for more information](#)

Sargent & Greenleaf

Continued from page 54

Halbert Greenleaf, relinquished his business relationship with Linus Yale to serve as a Colonel in the Union Army during the Civil War, then entered into an equal partnership with James Sargent in 1865, forming Sargent & Greenleaf. At this time, Mr. Sargent's lock designs were manufactured in a small shop in Rochester, New York.

During his long career in the security industry, James Sargent is credited with combination lock controlled by a time-keeping device in 1872, and the 1874 installation of a lock ever installed in a bank.

The prolific inventor died January 12, 1910, but the firm of Sargent & Greenleaf continued his name and his tradition of dedication to quality and innovation in the manufacturing of security hardware. Through the years, S&G continued to grow, despite momentary setbacks such as factory fires and the Great Depression.

Near the end of World War II, Harry Miller who was a very inventive and knowledgeable locksmith, began the development of a more secure combination lock. Like James Sargent, Mr. Miller developed techniques to bypass the locks of the day, and used this knowledge to design a mechanism that he could not bypass himself. Thus Harry Miller's development of the process of combination lock manipulation paved the way for his creation of the manipulation-proof lock. This lock development led Mr. Miller to an association with Sargent & Greenleaf, where he selected to produce the new combination lock design.

With royalties from the manipulation-proof lock and other inventions, Harry Miller acquired Sargent & Greenleaf in 1952, continuing the tradition of quality and innovation begun by James Sargent in 1857. Under his leadership, the company continued to grow and prosper in Rochester.

In 1975, S&G's offices and manufacturing operations were moved to Nicholasville, Kentucky. This move brought the company much closer to some of the country's largest safe makers, which are located in the Cincinnati, Ohio area. The move also made it possible to acquire additional land to future plant expansion.

In 1980, after 28 years as S&G's Chairman of the Board, Harry Miller,

sold the company to Security Group, which is based in Indianapolis, Indiana. The firm's newest owners were attracted by the company's tradition of security industry leadership through innovation and high quality manufacturing.

Today, Sargent & Greenleaf produces and distributes a wide range of specialized security devices, including high security government padlocks, electronic access mechanisms, locks for construction equipment, weather resistant padlocks, time locks and time delay devices, safe deposit locks and key operated safe locks. S&G also manufactures a full line of the highest quality combination locks, bearing Underwriters' Laboratories Group 2, Group 1 and IR listings. S&G's manipulation resistant locks are the only combination locks currently approved for use on new G.S.A. approved security containers, used to store our country's classified documents.

Sargent & Greenleaf serves the world's security needs through a worldwide distribution network, manufacturing and shipping products from the Nicholasville plant and S&G's facility in Switzerland. From the small workshop in Rochester, New York, the firm has grown to become a world class manufacturer of security devices, utilizing the latest technology to design and produce products which provide both high quality and superior value.

S&G's newest product, The Scrambler™ combination lock, continues its commitment in meeting current security needs with new ideas and quality products. The Scrambler, which is a significant development in combination locks, provides security by repositioning two of its three wheels every time it is unlocked, ensuring the safe is securely locked whenever the safe door boltwork is extended. This feature prevents employees from leaving a store's safe "day-locked," a condition which severely decreases a container's security. The Scrambler represents another forward stride in the combination lock industry.

Silca Key Service

In the year 1770, Prospero Bianchi, a blacksmith living in the vicinity of Venice, received an important communication....the king of Venice

needed a key for the massive door of his palace situated on an island in the middle of the Lagoon of Venice. After many trips to the ancient lever lock, Prospero made the key and was rewarded by being appointed the official locksmith to the court of Doge, the king of Venice. From such a humble beginning, the modern day firm of Silca evolved over the next 220 years with successive generations of family managing the business.

In 1960, Camillo Bianchi, the current president of Silca instituted the program of equipment modernization that would thrust the company into the premier position of the industry worldwide that they currently enjoy. Today, Camillo Bianchi is assisted by his sons Massimo, the Managing Director of Silca and Diego, the Head of Production. Hundreds of employees world-wide assist in the company's growth. A benchmark of the Silca companies is quality and service.

Silca employs the latest in technology with extensive use of C.A.D., Computer Aided Design equipment and software. These procedures assure the highest quality of the entire line of key duplicating machines and keys. Plus the company has introduced new models of key machines such as the Club Jr. Silca produces its extensive line of key blanks, key machines and related items in plants in various countries all over the world, including the newest facility in Twinsburg, Ohio.

In the United States, the release of the catalog No. 403 and the 1990 Keyblank Identification Guide have helped the locksmith to specify the correct Silca blank, helping to solve the myriad of problems in the selection process.

Silca products are distributed through the locksmith distributor. The company exhibits at the many regional and national locksmith shows throughout in the United States each year. Company representatives can be seen demonstrating key machines, distributing literature, explaining the latest in key blank and key machine information, and answering technical questions. All this carries on the Silca traditions of the highest possible quality and service.

The factory in Ohio, now fully operational, produces a line of 91 Image or "original like" blanks on premises. This line is augmented by a 700 plus line of blanks for vehicles including the newest in high security blanks for

Silca Key Services

Continued from page 56

automobiles. Silca key machines are sold and serviced from the Ohio based factory with a full line of replacement parts on call.

Later in 1990, Silca USA will start to add a complete line of cylinder household keys, continually upgrading them to offer an alternative source for the complete line of keys and services required for the American market.

Steadfast Corporation

Steadfast Corporation founded in 1982, in Chelsea, Massachusetts, is a custom designer and fabricator of specialty metals products for security, automotive, aerospace and other industries.

First formed to manufacture and market a device for the prevention of car thefts, Steadfast has become a leader in the auto anti-theft business. Initial sales of the Steadfast Security Collar were targeted at the rental car market to prove the device's effectiveness, as well as its mechanical reliability.

In 1983-84, approximately 3000 units were installed on Avis and

National rental cars with remarkable results. Theft rates were reduced from around 10 percent to less than one-percent. As a result of continued success in halting theft, all the major rental car companies have adopted the device where theft is a problem.

As word spread of the effectiveness of the anti-theft device, the company appointed distributors in high theft areas. The product has developed a strong appeal in the locksmith trade because of its reputation, the purely mechanical design and profit margin.

In 1986, Steadfast acquired the stamping house which had been making its products. Along with this equipment and expertise, came a secondary business of providing aircraft instrumentation for customers such as General Electric Company. The investment made in subsequent years to bring Steadfast to full qualification as a Military Specification supplier is reflected in the consistently high quality of its products.

Most recently, Steadfast has expanded its dealer network, and introduced several new products, including a tailgate locking device. It also plans further design and fabrication of custom security products.

Valli & Colombo

The Valli & Colombo story began in 1934 when Pasquale Valli and Palmiro Colombo formed the company to produce furniture fittings exclusively in Galalith and Bakelite.

Operating out of a small shop next door to their homes, Valli & Colombo quickly developed a reputation for producing quality products, which enabled the company to grow to 30 employees within a year. The fast paced growth, fueled by innovative ideas, quality craftsmanship and the ability to anticipate changing fashion and design trends, led Valli & Colombo to be the European market leader in the high-end decorator door hardware and coordinated accessory industry.

The company was one of the first European manufacturers to encourage the use of door hardware and furniture accessories as fashion and design elements for the home. This desire to satisfy a diverse public led Valli & Colombo to form separate brand identities for VCR, Fusital and Forges. The more traditional VCR offerings reflect the design and craftsmanship associated with Italian art and design, with many of the pieces crafted by



**The Innovation You Expect, with the
Flexibility You Need!**

[Click here for more information](#)

Valli & Columbo

Continued from page 58
Pasquale Valli himself.

The Fusital line was created by the best designers in Italy, with each line carrying the mark of its creator.

The Forges trademark epitomizes the best contemporary designs cast in solid zinc alloy and finished in brass, gold or in a variety of distinctive colors.

Zero International

The engineers at Zero have been pioneering, researching and testing new ways to update standards in door and window sealing systems for 67 years. The company offers a comprehensive line of sealing systems, which feature the latest in fire, smoke, acoustical and air filtration technologies.

Zero was started in 1924 by two Hungarian immigrants who, upon arrival in America, began manufacturing window screens, and since they had no monetary possessions when they started, they called the company "Zero." The current president, Elias Wexler, was hired ten years ago as Engineer-in-charge-of-production



Elias Wexler, Zero International.

development. A member of the DHI for 10 years, Mr. Wexler's perceptions and analysis of customers' needs has been the catalyst for many of the company's trend-setting designs.

At Zero International, almost everything is a first. For example, the company was the first in the industry to develop complete integrated systems as an alternative to individual components. In the 1970's, the engineers at Zero fashioned the first weatherstripping that could be used for soundproofing, and Zero was one of the first U.S. door and hardware companies to distribute separate catalogs for the American,

European and Japanese markets.

Zero International's in-house corps of engineers assist architects utilizing the technical resources of the company's engineering department, including a state-of-the-art computer-assisted design system. (CAD).

Zero's annual 32-page catalog features hundreds of unique systems for stopping the filtration of light, smoke, fire, air and sound, also door saddles and ramps. But this brochure is more than just a sales tool, the schematics are drawn to actual size so that architects can use the catalog's diagrams when designing and specifying their plans.

The key to Zero's success is its policy of constantly observing existing systems so that its engineers can research and design even better products to meet customers needs. Some recent examples of Zero's innovations include: the Traction Tread TM, Zero's revolutionary door saddle and stair nosing design, which the company premiered in 1988. The system features profiled metal grooves into which are fitted specially formulated, hard-wearing rubber inserts. These flush inserts ensure superior traction, an even, smooth

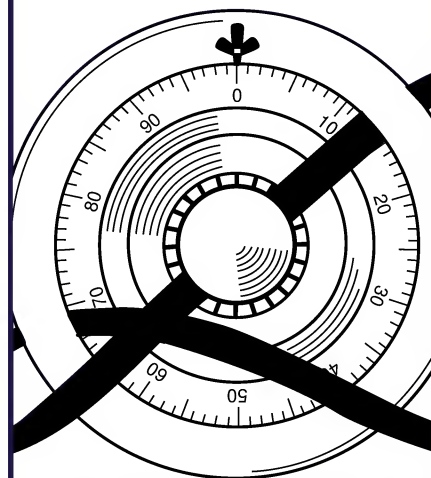
Continued on page 97



HPC, Inc.
Designing Excellence and
Manufacturing Quality
since 1956

[Click here for more information](#)

Lockmasters has a
44 year history of
training security
professionals.



[Click here for more information](#)

Servicing The 1990 Excel

"I was surprised to find that the wafers in the passenger door lock were numbered so that I could read the depths through the keyway with a scope."

by Bob Sieveking

The 1990 Hyundai is quite a little car. I recently had the opportunity to make keys for a '90 Excel and found it a joy to work on. I read the passenger door lock cylinder, and had a working key in less than 10 minutes, but thought I should explore some of the other key making possibilities for those who have not yet mastered wafer lock reading.

I was surprised to find that the wafers in the passenger door lock were numbered in such a way as to allow a locksmith to read the actual cut depths with an otoscope through the keyway. The depth numbers were clearly stamped on each wafer. I can hardly believe that this was intentional, but rather feel that the visibility of the

numbers was purely accidental on the part of the manufacturer.

You will probably not find the wafers numbered in all Hyundai autos, as I did, but you should be able to read the cuts, from the door or trunk cylinder, quite easily. The door and trunk cylinders have all their wafers at the top of the keyway, which means that the locks are single sided. The double sided key performs a convenience function, which allows it to work in the ignition, doors and trunk with only one side cut.

There are seven wafers and four depths. The 1200CM code card shows eight spaces, but I was unable to find an eighth wafer in the door or trunk cylinders. The eighth wafer, only found

in the ignition lock, is always a #2 depth. Most blanks will be pre-cut to the #2 depth in the eighth space. I could not think of a probable function for this arrangement.

The 1990 Hyundai Excel uses an X196 blank (Silca HYN5) for the ignition and doors. This is a longer version of the X160, with a slightly different head style. One key fits all locks on the car, and there is no Master/Valet system to fret about.

Though the dealership was able to furnish me with the code number for the keys to this auto, the code number does not, to the best of my knowledge, appear anywhere on the auto. The code will only be found on the metal tag that accompanies the "three" original keys,

medeco
HIGH SECURITY LOCKS

Integrity.
Ingenuity....
security
solutions.

[Click here for more information](#)

Major
MANUFACTURING, INC.

Installation Tools

The Professionals Choice

[Click here for more information](#)

stamped into the metal key blade, concealed by the plastic head of the key or on the dealer's original shipping invoice.

As you can see from the table of information in illustration one, series codes are used on the Excel and the "Y" codes are used on the Sonata. The HY 5 and HY 4 keys have the exact same profile but are the reverse of each other. This prevents the keys from being interchanged. Code card XF-201 is used on the '90 Hyundai "X" codes, but there is some confusion as to whether the Sonata "Y" codes will use the same code card or not.

Meanwhile, the "X" and "Y" codes can be found in The National Locksmith code update for 1990 on page 569. Depth and space measurements, listed in the chart, are furnished for those that are cutting keys on a Framon or Micrometer style code machine.

Opening the Excel is fairly straight forward, the unshielded button linkage was found to be the easiest thing to locate with the opening tool. In photograph two, the passenger window has been lowered to bring the bottom of the glass into view through an access hole in the inside of the door. You will see that there is a metal channel which grips the bottom of the window. The window regulator, which attaches to the channel, raises and lowers the glass. The outside flange of the channel serves to prevent opening tools from being easily inserted into the door along the bottom of the window.

Happily, the channel doesn't extend all the way to the rear of the glass. About 1" of space is left at the rear of the window, that will allow us to insert our "Z" tool. Carefully insert a wedge between the glass and the weather strip, about 4" from the rear of the passenger side window. The wedge was inserted on a steep angle, (see photograph 3) because the window channel prevented it from being inserted straight down. The tool is measured 14" down on the inside of the door, as you can see in the photograph. 14" brings the small hook just even with the rib in the door.

Insert the small hook end of the tool into the door, at the rear corner of the glass, with the hook toward the front of the car as shown. When the tool has been inserted to a depth of 14", turn it 90 degrees clockwise to bring the hook under the inside button linkage. Lift the tool to unlock the door. Open the door as soon as the button rises, then remove the tool and wedge. This will prevent

1990 HYUNDAI EXCEL & SONATA

Code Series Key # Taylor (ILCO)

Excel X1001-2000 X196 (HY5)

Sonata Y1001-2000 X187 (HY4)

1200CM code card

XF-201

National Locksmith Codes

'90 NL Code Update, Page 569

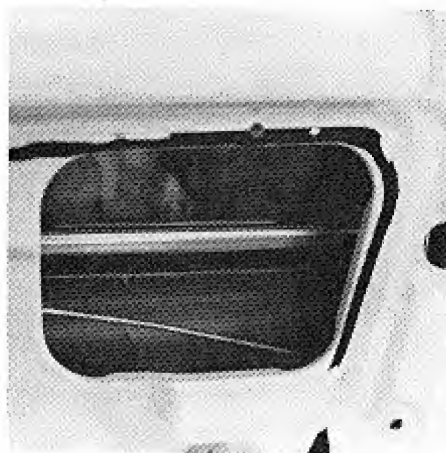
Reed Code Location

Vol. 9, Sect. 2, Pg. 235

Baxter Book Book #34

Depths	Spaces (bow-tip)
1 • .275"	1 • 2.5mm - .098"
2 • .255"	2 • 5.0mm - .195"
3 • .235"	3 • 7.5mm - .293"
4 • .215"	4 • 10.0mm - .390"
	5 • 12.5mm - .488"
step .020	6 • 15.0mm - .585"
	7 • 17.5mm - .683"
	8 • 20.0mm - .780"

Illustration 1



2. An access hole allow you to see the bottom of the glass.

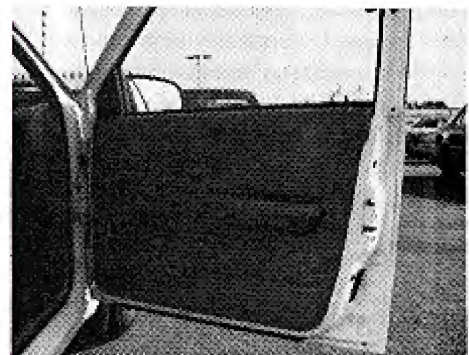


3. The wedge inserted at a steep angle.

you from relocking the door as you remove the tool.

Always clean the glass with a soft cloth to remove any rust-proofing residue which may have been carried out of the door by the opening tool. Use a little spray oil as a solvent if necessary. If the keys have been retrieved from inside the car, try them in the lock immediately. This is to satisfy yourself and the customer that no damage has been done to the lock or linkage. Always "check your work."

Removing the lock cylinder from the door is very easy. In photograph four, the inside of the passenger door is shown. Unscrew the two phillips head screws, under the arm rest, to remove it. Behind the latch release handle is a small square plastic screw cover. Remove it to reveal another phillips head screw. Remove the screw and slide the latch release trim cover forward to disengage the hook which secures it to the door. The window regulator handle is locked on with a GM style wire horse shoe clip. Use a wire hook, under the rubber trim washer, to disengage the clip, freeing the handle. Be careful not to lose the wire clip. Use a wide pad knife or trim pad clip tool to lift the door trim pad away from the door.

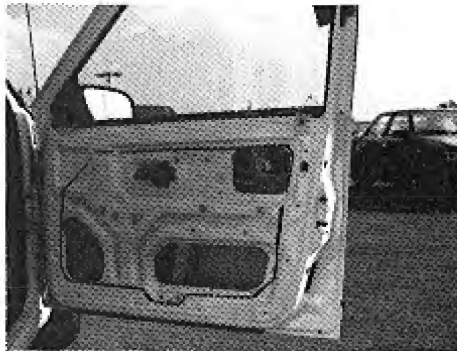


4. The inside of the passenger door.

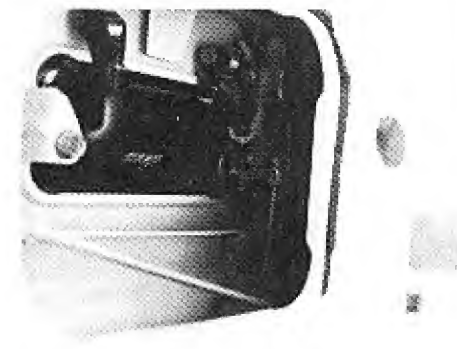
The Hyundai uses ball and socket style trim fasteners, shown in photograph five to secure the door trim. With the door trim and inner plastic vapor shield removed, as in photograph six, the lock cylinder can be easily serviced. Photograph seven shows the rear of the lock cylinder. The arrow in the photograph shows the location of the wire cylinder retainer. The cylinder retainer has two small ears, that will allow the locksmith to rotate and disengage the retainer to a position that will release the lock cylinder without removing the lift handle assembly. Disconnect the lock cylinder linkage at the cylinder cam, release the wire retainer and slide the cylinder out of the handle assembly, toward the inside of



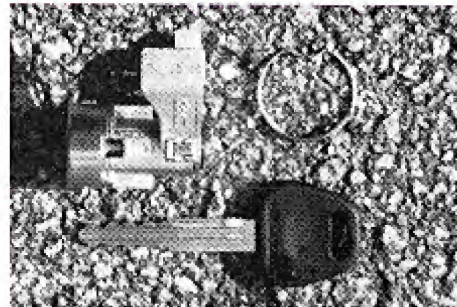
5. Ball and socket style trim fasteners.



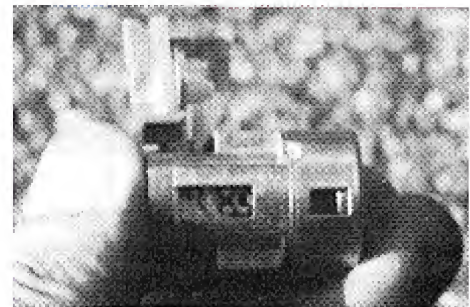
6. The door trim and inner plastic vapor shield is removed.



7. The rear of the lock cylinder.



8. The wire retaining ring, door cylinder and key.



10. Bottom view of the lock cylinder.

1990 HYUNDAI EXCEL & SONATA

Auto Security Products parts

Excel

ign/lock	C-36-103 std trans
assy	C-36-201 auto
door locks	D-36-110 (left side)
	D-36-111 (right side)
trunk lock	B-36-113 (hatch bk)
	B-36-112 (sedan)
trunk cap	P-36-201
keying kit	A-30-104

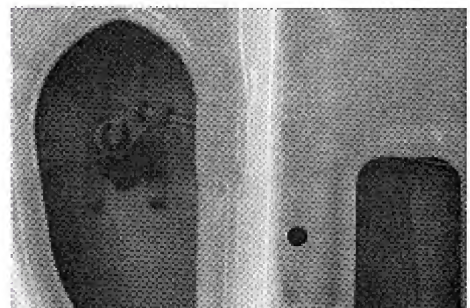
Sonata

ign/lock	C-36-102
door locks	D-36-108 (left side)
	D-36-109 (right side)
trunk lock	B-36-107
trunk cap	P-36-201
keying kit	A-30-104

Illustration 9



11. The rear deck is mounted high.



12. The lock cylinder is connected to the latch mechanism.

the door. After removing the lock cylinder, replace the wire cylinder retainer in its groove, ready to receive the cylinder after servicing.

In photograph eight, the wire retaining ring, door cylinder and key are shown. Notice the "indent" in the wire retaining ring. It is this indent that engages and locks the door cylinder into the lift handle assembly. Notice the metal wing on top of the door cylinder in photograph eight. This wing effectively shields the cylinder pawl or lock cam from slim jim attacks. You will notice the letters "RD" cast into the top of the lock case. Loosely translated from the original Korean, this means right door. The door locks of the Hyundai Excel and Sonata are handed, left and right, and are not reversible or interchangeable.

The table in illustration nine shows the different stock numbers for the right and left doors. You will notice that there is no stock number for door cylinder caps. The door cylinders are made so they can be disassembled without destroying the caps. Replacement caps are not required.

If we look at the lock cylinder from the bottom (see photograph 10), you can easily decode the wafers in all seven positions. The large drain hole, indicated by the arrow, reveals the last five wafers, positions three through seven and the smaller hole toward the front of the cylinder allows us to see the wafers in positions one and two. Reinstall the lock cylinder into the hole in the lift handle housing and push it toward the outside of the door. The wire retaining ring, which we removed earlier, will snap over a boss on the lock cylinder, and the job is complete. Don't forget to connect the lock linkage and try the door before replacing the trim panel.

The rear deck, or trunk lock of the Excel is mounted high and to the right of the license plate recess, as you can see in photograph 11. The lock cylinder is connected to the latch mechanism by a single long straight linkage. (See photograph 12.) I found no remote trunk releases on the Excel models on the lot, and believe me that it most probably is not an option on this model. I tried to find a way to bypass the lock

cylinder by hooking the linkage through a license plate mounting hole, but found it impossible. If you need to get into the trunk, and don't have a key, your best bet is to pick the lock. You'll find these locks are reasonably easy to pick.

The column mounting ignition lock of the Excel reminds me of some of the older Mitsubishi locks found on the Japanese Chrysler products like the Plymouth Arrow and Dodge D-50 pickups. The plastic trim can be removed from the column by unscrewing the three screws from the bottom half of the shroud, as shown in photograph 13. The ignition lock assembly (complete with major casting) is Auto Security Products part number C-36-201.

The ignition lock assembly is fastened to the steering column by two concealed headless bolts, as indicated in photograph 14. They can be unscrewed and removed with a small prick punch and hammer. The directional signal and hazard warning switch assembly are fastened to the ignition lock housing with four phillips head screws.

Continued on page 98



Safe Opening Blues!

"She showed me how she usually opened the safe by stopping at zero. Then she proceeded to beat on my new T-handle with a hammer!"



by Dale Libby

Safe opening always represents new and exciting problems and if working on safes was always routine, then the openings would be mundane and offer no challenges. Thriving on circumstances and problems, is what I always thought locksmiths did until "Black Thursday" came along.

I had three safe jobs on "Black Thursday" that were out of my work

area, and all ended up as disasters in one way or another. It was one of those days that makes you think about giving up safe work

forever and becoming a used car salesman.

The third and last job of that fateful day occurred because of a handle repair that I did on the safe about one month ago. The story about that safe is an interesting yet typical safe job. A country bar wanted to handle Illinois "lotto" cards, and one of the requirements is they must have a lockable safe to put the tickets and other information into before they can handle the program. Of course they went out and found a dinosaur safe that was

thankfully, open. The reason that I refer to it as a dinosaur safe is that it was old, huge, and almost impossible to move.

With some help from some tow-truck people that I recommended, they got the safe to the bar, while breaking the door and the door frame getting the unit through the door. When they tried to move it down the back stairs, it fell through the top stair and collapsed the staircase. I was not present at the time, but I heard this story from the exasperated owner when I came to service and put a new combination on this "monster of destruction."

The first servicing I did on the safe was over five years ago. I determined the combination on the Yale OB

NATIONAL
AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder

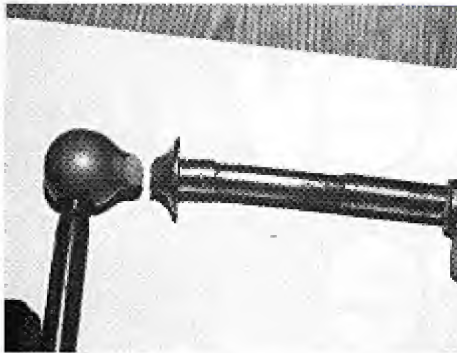
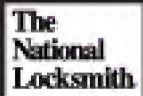
programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

www.laserkey.com



**Make Sargent & Greenleaf's
Comptronic locks your
choice for electronic safe
locking solutions.**

[Click here for more information](#)



1. The handle ball is broken off of the handle spindle.

combination lock, and then spent hours shimmying up the door so that it would work properly. This was a feat in itself since the safe was 4-1/2' tall, 4' wide and 4' deep. When I was done servicing the unit, the door opened and closed easily, even though it had been dropped through the stairs onto the concrete basement floor.

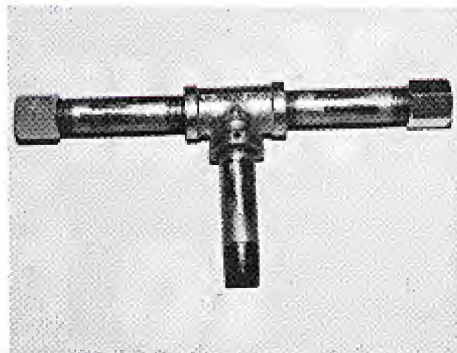
I was amazed, the owner was happy, and all went well for about five years, until I received the emergency call stating that the handle had broken off about four weeks ago, and they were having problems opening and closing the safe door. I wandered immediately out to the store and took the handle and spindle off the safe.

The manager wanted to know if I could get a new handle, and I told her that if I could travel back to 100 years ago, I would have a good chance of replacing it, but now I would have to improvise. In photograph one, the handle ball is broken off the handle spindle, which has a total length of 7".

I took the handle and spindle to a welder friend of mine, but the brass casting proved to be impossible to braze to be strong enough to withstand the pressure that bar employees were putting on the handle. After five years, the shims had been worn to nothing by the heavy door, and I suspected that the hinges were also going.

To make the safe easier to open, I decided to make a "T" handle to replace the old tear-drop-type that was originally on the safe. In photograph two, I made a "T" handle from 1/4" pipe fittings, and I tension (tension) pinned the shaft going into the safe so that it would not unscrew when excessive pressure was exerted on it. I had to cut the existing spindle, so when the total length was put together it would again be 7", and by using the back half of the spindle, less modernizing would have to be done.

The cam fit into the square-shaped end of the spindle, which has an overall



2. Replacement "T" handle made from 1/4" pipe plumbing parts.

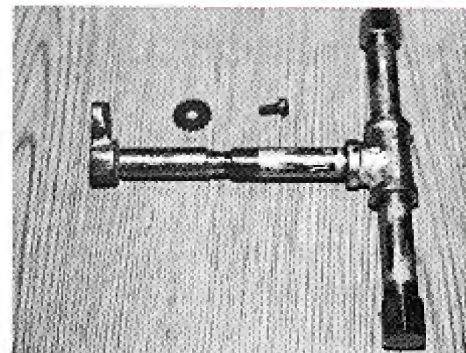
diameter of 5/8". I had to machine it down to fit into the pipe. Once a snug fit was achieved inside the pipe, I removed the cut down spindle, spread Epoxy glue on it, and shoved it together to the proper length, and let it set-up. When it was dry, I drilled and fit two tension pins at right angles to each other. The repair was done. (See photograph 3.) I reinstalled the handle into the safe, re-shimmed the door so it worked well again. I thought that I was through with this unit, but I did not plan on "Black Thursday."

My last call of the day was this monster unit in a town called Gilberts. When I got there, I was told that no amount of dialing would open the unit. I tried it myself but there was not connection between the driver and the wheel pack. Just for laughs, I asked the bar manager to show me how she opened the safe, and she dialed the combination, stopped the dial at zero, and proceeded to hit my new "T" handle with a hammer! This is how you had to open the unit.

When I serviced the safe originally, I showed the owner of the bar how to open the safe, with the last turn to "STOP" which happened to be on zero. They were dialing the combination and turning to zero, while forcing the opening handle with anything they had handy to get the unit open. I now know how the handle was originally broken, because they dialed the combination incorrectly, beating the handle until it opened, and if it did not open, they kept beating the handle instead of dialing the combination correctly.

She stated that after beating the handle, the combination started to turn real easily. What she had done was to shatter the case cover which allowed the wheel pack to come loose just enough to keep the safe from opening. However, the handle did not break. Now I had to open this century old safe. Easy, I just go in from the back.

Drilling from the back and removing



3. The completed unit.

the curb or wheel pack screws is a trick that really works, especially on some old Mosler safes, but all did not go as planned. I drilled one hole through the back of the safe in line with one of the curb screws and after 7", I penetrated into the safe and met a wall of plastic and metal.

When I had worked on the safe before, there was only a small lock box in the bottom of the safe, but when the safe was operating, they had installed home-made shelves of plastic pop-cartons and sheet metal. I tried to poke a hole through this barrier, and it tipped over into the safe against the front door, effectively blocking all access to the loose combination wheel pack.

I tried several ways to get through this inner barrier, but I could not get anywhere. It was hard enough to make a 7" hole into the back of the safe, when the longest drill bit I had left was only 6" in length. They had to get the safe open for their change and "Lotto" tickets. I now informed the owner, that I could get into the safe, but that the safe would not last the process. He decided that he wanted me to continue.

One hour and a half later, the safe was opened. I drilled in at approximately 8 o'clock to get the locking bar. When it is 7" into the proper position, and your drills are only 6" long, it is then time to use the expandable screw drivers.

My drift punch would not go in far enough, so I had to open up the outside 1/2" hole to 3/4" and beat my longest punch with another punch inside the hole to persuade the safe to open. Many of the proper tools I usually use on these safes were lost or broken, or in for sharpening from the first two safes that I had worked on that day. So by repairing the safe handle "too" well, I caused a lockout, according to the owner. I was too mad at him this time to charge him. He has twelve restaurants that I service regularly, so I'll talk to him later. Open and prosper!

Impressioning Can Be Fun

"I filed my fingernails a bit and glanced around to see that everybody else was following the instructors directions before I had even begun."



by Sara Probasco

Impressioning was the subject of the first locksmith class I ever attended, and I shall never forget it. That was at the 1987 ALOA convention in Dallas, TX. I had decided that if I was going to work in the locksmith shop, I had to learn to do something besides cutting keys and answering the telephone.

"This will be a snap," I thought. After all, I had watched Don impression everything from padlocks to automotive locks. He had no problem. How difficult could it be?

First, we watched a demonstration. Our instructor went over the basic technique of preparing the blank, marking the proper spacings moving the blank in the lock, and filing techniques. In minutes, his key was properly made for opening the lock. Then we were each given a "simple little wafer lock" to impression.

I was not going to rush into this. After all, I reasoned, anything worth doing was worth taking a little extra time doing right. I filed my fingernails a bit and glanced around to see that everybody was following the instructions, before I had even begun.

One or two of the guys had theirs open in short order and moved on to something more difficult, confirming my earlier opinion that impressioning was a snap. In fifteen or twenty minutes, a few others had finished so I decided to get down to work in earnest. More were successful by the end of the first half-hour.

Before an hour was up, everyone had finished except me. By that time, I had succeeded in breaking six keys, bending two others beyond recognition, rubbing a rather large blister on the inside of my

right thumb, and driving my instructor to the far edge of his patience. Also I had somehow managed to spear my left hand with a rat-tail file and had snagged my knit slacks in several places, wiping off the filings on the back of my leg as I'd observed others doing.

We had been discouraged from using magnifiers to see the marks impressed on the blanks, but I decided that some compromise was in order. It was time to lay vanity aside and fish my glasses out of my purse.

With improved vision, and in the glare of fluorescent light, everything seemed to reflect on the variety of imperfections and file marks on my mutilated key blank. I wasn't sure exactly what I was looking for. To my untrained eye, every tiny shadow looked like a mark, and every stroke of my file seemed to produce new shadows.

By this time, our instructor had taken me on as the supreme challenge of his colorful career. Hovering beside me, he examined my every move, determined that I would, despite all odds, make that key.

The day wore on. At around three that afternoon, I finally turned away from the light and saw the tiny marks clearly impressed on the key. In short order, I managed to create a working key.

"I did it! I did it!" was my gleeful cry. Tears welled up in my eyes as the entire class stopped their work to cheer.

I learned a number of things that day. Among them:

1. Files make wrong passes when you don't wear your glasses.
2. Filing keys is different from filing fingernails.
3. Knit slacks with "racing stripes" across the back of one leg are not likely to make a fashion statement.
4. Learning to impression is a lot like learning to ride a bicycle. Once you get the knack of it you never forget.

Since that day in Dallas, I have managed to whip through impressioning

on a number of august occasions to my great delight and to the amazement of some of our customers.

Invariably, when a male customer brings a key-less lock into our shop, the response I receive to my gentle inquiry is, "No thank you little lady. I'll just wait for the locksmith."

My next question is usually, "What is it you need done?"

"I got this here lock I need a key made for," they may drawl, glancing about nervously, their eyes avoiding mine, apparently embarrassed over the fact that I'm a woman and, therefore, have no understanding of complicated mechanisms such as locks and keys.

Well, I have news for them.

Few things please me more than strolling out to some chauvinist's Ford "pick 'em up," while he skeptically leans against the building under the shade of an overhang, smirking and gracefully squirting tobacco juice through the air.

I push up my sleeves, clamp a key blank into my channel lock pliers, give the key a few figure-eights in the lock, do a little filing, and BOOM, I hand "Tex" a working key. The astonishment on his face is worth all the agony I went through developing this skill. Besides, next time, that man will ask for me!

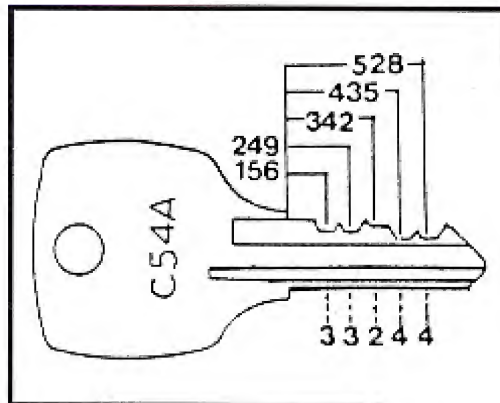
Although I am not always able to impression locks that speedily, I have found that there is something strange, almost mystical about the entire process. I'll share a little secret with you. Although I have been following my instructor's caution about not filing what I cannot see, a nagging doubt in the back of my mind always asks, "Was that really a mark, or are your eyes playing a trick?" You can imagine my delight when the lock opens.

Despite the successful results I usually have with impressioning, I have never had an experience quite like a gas cap lock that Don encountered one morning. Gulping down his coffee before running the call, Don yawned and

Continued on page 99

National Disc Codes

©The National Publishing Co., 1990



DEPTHS

0-	5-
1- 0.250	6-
2- 0.225	7-
3- 0.200	8-
4- 0.175	9-

KEYWAYS

K Series	D8794
M Series	D8793
N Series	D8792
D Series	D8783

Editor's Note: There are four National Series which all feature identical codes. The difference between them is the key blanks they require. The four series are: K001E-625E; M001E-625E; N001E-625E; and D001E-625E. Here we are printing only the first two series, but under keyways, you will find the numbers of the original keyblank for each series.



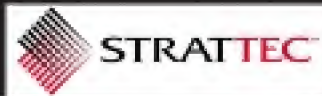
***It's not safe
unless it's
Schwab Safe.***

[Click here for more information](#)



**SRI and Steve
Young are working
together to bring
you the best in
locksmith tools and
supplies.**

[Click here for more information](#)



K001E-625E NATIONAL

Keyblanks:

 Original D8794
 Ilco 1069T

Code Machines:

1200 CM No. 37

0001	0051	0101	0151	0201
01 24422	51 20222	01 26646	51 04426	01 22444
02 24426	52 24200	02 66646	52 02464	02 00244
03 64466	53 00220	03 64666	53 04646	03 20226
04 64646	54 00202	04 24266	54 02026	04 22046
05 22644	55 20020	05 24222	55 00426	05 26666
06 26644	56 02200	06 24226	56 20446	06 22446
07 66644	57 02020	07 04422	57 04464	07 04444
08 66464	58 02002	08 02442	58 20246	08 02226
09 44226	59 20002	09 04242	59 20266	09 00022
10 44222	60 24424	10 02022	60 20464	10 20466
11 44266	61 24464	11 02202	61 22026	11 00444
12 46466	62 64464	12 22002	62 20426	12 00226
13 42422	63 66444	13 20022	63 20046	13 22666
14 42426	64 26444	14 20202	64 00264	14 00026
15 42466	65 46644	15 20220	65 02046	15 02666
16 66446	66 42644	16 02220	66 00464	16 22226
17 26446	67 42244	17 22020	67 20026	17 22466
18 22442	68 22264	18 20424	68 04226	18 02222
19 24242	69 22664	19 20442	69 02264	19 00266
20 24246	70 26664	20 02424	70 02426	20 02266
21 24646	71 66664	21 22044	71 02664	21 00666
22 44442	72 42424	22 22004	72 02646	22 02246
23 44464	73 46464	23 20024	73 24666	23 04664
24 64444	74 46446	24 20204	74 02244	24 02644
25 46444	75 42446	25 02204	75 44446	25 00466
26 42444	76 04664	26 02024	76 46666	26 24462
27 44244	77 42442	27 20444	77 22224	27 64422
28 44644	78 64446	28 02044	78 24444	28 64426
29 44424	79 44646	29 04224	79 44666	29 64462
30 22424	80 44246	30 00204	80 00246	30 64642
31 22464	81 44242	31 04442	81 00024	31 64246
32 26464	82 64644	32 04424	82 00466	32 64242
33 24664	83 24644	33 20004	83 42220	33 62244
34 24224	84 24244	34 02004	84 44466	34 62644
35 24264	85 44224	35 20242	85 22244	35 26244
36 42264	86 44264	36 00042	86 02224	36 66244
37 42664	87 44664	37 22204	87 02446	37 66424
38 42224	88 44426	38 22024	88 04666	38 62424
39 46664	89 44422	39 20224	89 00224	39 62464
40 46646	90 42266	40 04244	90 04466	40 66662
41 42242	91 42222	41 22042	91 22266	41 66622
42 42246	92 42226	42 20042	92 00044	42 66626
43 42646	93 42666	43 00242	93 24466	43 66226
44 64664	94 66466	44 02042	94 20264	44 66266
45 00424	95 26466	45 04222	95 04446	45 66262
46 00442	96 22422	46 20422	96 22246	46 62262
47 20044	97 22426	47 02242	97 02444	47 62266
48 22220	98 22646	48 02422	98 02466	48 62226
49 22202	99 22246	49 22000	99 00222	49 62222
50 22022	00 22242	50 22200	00 00446	50 66222



K001E-625E NATIONAL

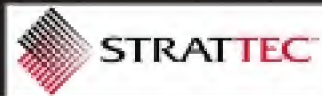
Keyblanks:

Original D8794
 Ilco 1069T

Code Machines:

1200 CM No. 37

0251	0301	0351	0401	0451
51 26222	01 02404	51 62462	01 00400	51 42000
52 26226	02 02440	52 62466	02 04004	52 40022
53 26266	03 20440	53 62426	03 44044	53 40220
54 26262	04 24040	54 62422	04 40004	54 00420
55 26662	05 24004	55 26422	05 40422	55 02402
56 26622	06 44002	56 26426	06 44202	56 02420
57 26626	07 40402	57 26462	07 42402	57 20420
58 22626	08 40420	58 22462	08 00404	58 20240
59 22622	09 40240	59 22642	09 42240	59 04020
60 22662	10 40042	60 26242	10 40044	60 24202
61 22262	11 42042	61 26246	11 40244	61 24220
62 62662	12 40242	62 26642	12 04404	62 24022
63 62666	13 40204	63 66642	13 24420	63 22420
64 62626	14 40024	64 66246	14 40404	64 42202
65 62622	15 64424	65 66242	15 40442	65 40200
66 44622	16 62444	66 62242	16 24440	66 42022
67 44626	17 46244	67 62246	17 44042	67 04022
68 44262	18 22624	68 62646	18 44240	68 04200
69 44662	19 26624	69 62642	19 44204	69 24020
70 46462	20 26224	70 64662	20 44024	70 24002
71 46426	21 26264	71 64626	21 24000	71 40002
72 46422	22 66624	72 64622	22 24404	72 04240
73 42462	23 66224	73 64222	23 42044	73 44440
74 62442	24 66264	74 64226	24 42440	74 44400
75 62446	25 62264	75 64266	25 04044	75 44000
76 66442	26 62664	76 64262	26 44004	76 22402
77 26442	27 62624	77 24626	27 44420	77 02240
78 26424	28 62224	78 24622	28 44402	78 20402
79 24624	29 46424	79 24262	29 40202	79 22440
80 42624	30 46442	80 24662	30 42200	80 22400
81 46224	31 64442	81 24402	31 42020	81 22240
82 46624	32 44642	82 00440	32 42002	82 20040
83 46264	33 24446	83 44220	33 42404	83 04462
84 46642	34 64244	84 04400	34 40020	84 04264
85 46242	35 44624	85 04040	35 40222	85 04624
86 42642	36 44462	86 24240	36 06422	86 04642
87 64624	37 46262	87 24042	37 00402	87 04246
88 64264	38 46266	88 22404	38 02400	88 04026
89 64224	39 42262	89 24204	39 20400	89 02624
90 44200	40 42626	90 24024	40 22040	90 02666
91 44020	41 42622	91 04220	41 00240	91 02262
92 04420	42 42662	92 42420	42 02040	92 02622
93 04402	43 46662	93 44022	43 04002	93 02626
94 20404	44 46622	94 44404	44 04202	94 00262
95 24400	45 46626	95 40444	45 24200	95 00462
96 42400	46 46226	96 40400	46 44040	96 24046
97 42004	47 46222	97 42204	47 40424	97 26204
98 04042	48 66422	98 42024	48 40440	98 26440
99 04024	49 66426	99 40224	49 04440	99 22640
00 04204	50 66462	00 40040	50 24044	00 26240



K001E-625E NATIONAL

Keyblanks:

Original D8794
Ilco 1069T

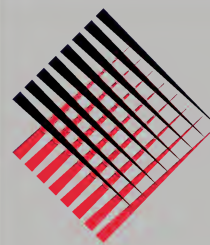
0601

Code Machines:

1200 CM No. 37

0501	0551
01 20462	51 66400
02 22620	52 62200
03 26220	53 62004
04 26420	54 62420
05 26402	55 04046
06 26620	56 04640
07 44026	57 04622
08 40426	58 04262
09 44620	59 04626
10 46220	60 02462
11 40462	61 02642
12 40466	62 04266
13 40046	63 24640
14 40446	64 24026
15 44046	65 20262
16 46400	66 26202
17 46440	67 26400
18 46404	68 26404
19 42640	69 46420
20 42046	70 46402
21 40246	71 46204
22 46240	72 46200
23 46640	73 46620
24 44640	74 40264
25 40266	75 40226
26 40026	76 40262
27 64420	77 46202
28 64402	78 42026
29 64042	79 42620
30 64046	80 64240
31 64004	81 64204
32 62044	82 64024
33 62404	83 64200
34 64640	84 64002
35 64040	85 66202
36 66440	86 62220
37 66404	87 62202
38 64440	88 62022
39 64044	89 62026
40 64404	90 62620
41 62002	91 66620
42 62220	92 62240
43 62040	93 62400
44 66240	94 64000
45 66640	95 26200
46 64022	96 26640
47 64202	97 62640
48 64026	98 62046
49 64620	99 62402
50 62000	00 62020

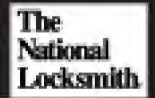
01 62024	11 20000	21 20222	31	41
02 62042	12 02000	22 42464	32	42
03 64220	13 00200	23 02620	33	43
04 64020	14 00002	24 00422	34	44
05 62204	15 22222	25 00400	35	45
06 66204	16 44444	26	36	46
07 66420	17 66666	27	37	47
08 66402	18 40000	28	38	48
09 66200	19 04000	29	39	49
10 40464	20 22064	30	40	50



STRATTEC™

The world's largest
producer of
automotive locks
and keys.

[Click here for more information](#)



Keyblanks:

Original D8792
Ilco N/A

N001E-625E NATIONAL

Code Machines:
1200 CM No. 37

0001			0051			0101			
01	24422	26	42444	51	20222	76	04664	01	26646
02	24426	27	44244	52	24200	77	42442	02	66646
03	64466	28	44644	53	00220	78	64446	03	64666
04	64646	29	44424	54	00202	79	44646	04	24266
05	22644	30	22424	55	20020	80	44246	05	24222
06	26644			56	02200			06	24226
07	66644	31	22464	57	02020	81	44242	07	04422
08	66464	32	26464	58	02002	82	64644	08	02442
09	44226	33	24664	59	20002	83	24644	09	04242
10	44222	34	24224	60	24424	84	24244	10	02022
		35	24264			85	44224		
11	44266	36	42264	61	24464	86	44264	11	02202
12	46466	37	42664	62	64464	87	44664	12	22002
13	42422	38	42224	63	66444	88	44426	13	20022
14	42426	39	46664	64	26444	89	44422	14	20202
15	42466	40	46646	65	46644	90	42266	15	20220
16	66446			66	42644			16	02220
17	26446	41	42242	67	42244	91	42222	17	22020
18	22442	42	42246	68	22264	92	42226	18	20424
19	24242	43	42646	69	22664	93	42666	19	20442
20	24246	44	64664	70	26664	94	66466	20	02424
		45	00424			95	26466		
21	24646	46	00442	71	66664	96	22422	21	22044
22	44442	47	20044	72	42424	97	22426	22	22004
23	44464	48	22220	73	46464	98	22646	23	20024
24	64444	49	22202	74	46446	99	22246	24	20204
25	46444	50	22022	75	42446	00	22242	25	02204



**ASP Covers the World
of Auto Locks**

[Click here for more information](#)



**Don't panic!
We have
Security Exit
Devices.**

[Click here for more information](#)



Keyblanks:
 Original
 Ilco

D8792
 N/A

N001E-625E NATIONAL

Code Machines:
 1200 CM No. 37

0151			0201		
26 02024	51 04426	76 46666	01 22444	26 24462	
27 20444	52 02464	77 22224	02 00244	27 64422	
28 02044	53 04646	78 24444	03 20226	28 64426	
29 04224	54 02026	79 44666	04 22046	29 64462	
30 00204	55 00426	80 00246	05 26666	30 64642	
	56 20446		06 22446		
31 04442	57 04464	81 00024	07 04444	31 64246	
32 04424	58 20246	82 00466	08 02226	32 64242	
33 20004	59 20266	83 42220	09 00022	33 62244	
34 02004	60 20464	84 44466	10 20466	34 62644	
35 20242		85 22244		35 26244	
36 00042	61 22026	86 02224	11 00444	36 66244	
37 22204	62 20426	87 02446	12 00226	37 66424	
38 22024	63 20046	88 04666	13 22666	38 62424	
39 20224	64 00264	89 00224	14 00026	39 62464	
40 04244	65 02046	90 04466	15 02666	40 66662	
	66 00464		16 22226		
41 22042	67 20026	91 22266	17 22466	41 66622	
42 20042	68 04226	92 00044	18 02222	42 66626	
43 00242	69 02264	93 24466	19 00266	43 66226	
44 02042	70 02426	94 20264	20 02266	44 66266	
45 04222		95 04446		45 66262	
46 20422	71 02664	96 22246	21 00666	46 62262	
47 02242	72 02646	97 02444	22 02246	47 62266	
48 02422	73 24666	98 02466	23 04664	48 62226	
49 22000	74 02244	99 00222	24 02644	49 62222	
50 22200	75 44446	00 00446	25 00466	50 66222	



***To be a World Leader You Need Quality Products,
 Innovative Technology and Strong Partners.***

[Click here for more information](#)



N001E-625E NATIONAL

Keyblanks:
 Original D8792
 Ilco N/A

Code Machines:
 1200 CM No. 37

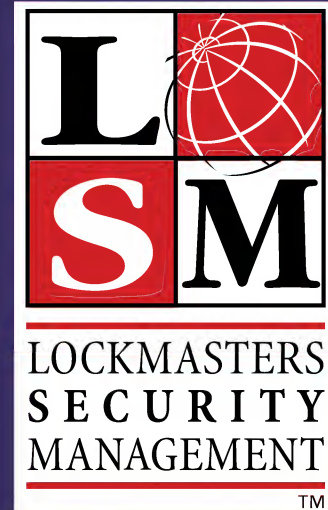
0251	0301	0351	0401	0451
51 26222	01 02404	51 62462	01 00400	51 42000
52 26226	02 02440	52 62466	02 04004	52 40022
53 26266	03 20440	53 62426	03 44044	53 40220
54 26262	04 24040	54 62422	04 40004	54 00420
55 26662	05 24004	55 26422	05 40422	55 02402
56 26622	06 44002	56 26426	06 44202	56 02420
57 26626	07 40402	57 26462	07 42402	57 20420
58 22626	08 40420	58 22462	08 00404	58 20240
59 22622	09 40240	59 22642	09 42240	59 04020
60 22662	10 40042	60 26242	10 40044	60 24202
61 22262	11 42042	61 26246	11 40244	61 24220
62 62662	12 40242	62 26642	12 04404	62 24022
63 62666	13 40204	63 66642	13 24420	63 22420
64 62626	14 40024	64 66246	14 40404	64 42202
65 62622	15 64424	65 66242	15 40442	65 40200
66 44622	16 62444	66 62242	16 24440	66 42022
67 44626	17 46244	67 62246	17 44042	67 04022
68 44262	18 22624	68 62646	18 44240	68 04200
69 44662	19 26624	69 62642	19 44204	69 24020
70 46462	20 26224	70 64662	20 44024	70 24002
71 46426	21 26264	71 64626	21 24000	71 40002
72 46422	22 66624	72 64622	22 24404	72 04240
73 42462	23 66224	73 64222	23 42044	73 44440
74 62442	24 66264	74 64226	24 42440	74 44400
75 62446	25 62264	75 64266	25 04044	75 44000
76 66442	26 62664	76 64262	26 44004	76 22402
77 26442	27 62624	77 24626	27 44420	77 02240
78 26424	28 62224	78 24622	28 44402	78 20402
79 24624	29 46424	79 24262	29 40202	79 22440
80 42624	30 46442	80 24662	30 42200	80 22400
81 46224	31 64442	81 24402	31 42020	81 22240
82 46624	32 44642	82 00440	32 42002	82 20040
83 46264	33 24446	83 44220	33 42404	83 04462
84 46642	34 64244	84 04400	34 40020	84 04264
85 46242	35 44624	85 04040	35 40222	85 04624
86 42642	36 44462	86 24240	36 06422	86 04642
87 64624	37 46262	87 24042	37 00402	87 04246
88 64264	38 46266	88 22404	38 02400	88 04026
89 64224	39 42262	89 24204	39 20400	89 02624
90 44200	40 42626	90 24024	40 22040	90 02666
91 44020	41 42622	91 04220	41 00240	91 02262
92 04420	42 42662	92 42420	42 02040	92 02622
93 04402	43 46662	93 44022	43 04002	93 02626
94 20404	44 46622	94 44404	44 04202	94 00262
95 24400	45 46626	95 40444	45 24200	95 00462
96 42400	46 46226	96 40400	46 44040	96 24046
97 42004	47 46222	97 42204	47 40424	97 26204
98 04042	48 66422	98 42024	48 40440	98 26440
99 04024	49 66426	99 40224	49 04440	99 22640
00 04204	50 66462	00 40040	50 24044	00 26240

N001E-625E NATIONAL

Keyblanks:
Original D8792
Ilco N/A

Code Machines:
1200 CM No. 37

0501	0551	0601
01 20462	51 66400	01 62024
02 22620	52 62200	02 62042
03 26220	53 62004	03 64220
04 26420	54 62420	04 64020
05 26402	55 04046	05 62204
06 26620	56 04640	06 66204
07 44026	57 04622	07 66420
08 40426	58 04262	08 66402
09 44620	59 04626	09 66200
10 46220	60 02462	10 40464
11 40462	61 02642	11 20000
12 40466	62 04266	12 02000
13 40046	63 24640	13 00200
14 40446	64 24026	14 00002
15 44046	65 20262	15 22222
16 46400	66 26202	16 44444
17 46440	67 26400	17 66666
18 46404	68 26404	18 40000
19 42640	69 46420	19 04000
20 42046	70 46402	20 22064
21 40246	71 46204	21 20222
22 46240	72 46200	22 42464
23 46640	73 46620	23 02620
24 44640	74 40264	24 00422
25 40266	75 40226	25 00400
26 40026	76 40262	26
27 64420	77 46202	27
28 64402	78 42026	28
29 64042	79 42620	29
30 64046	80 64240	30
31 64004	81 64204	31
32 62044	82 64024	32
33 62404	83 64200	33
34 64640	84 64002	34
35 64040	85 66202	35
36 66440	86 62220	36
37 66404	87 62202	37
38 64440	88 62022	38
39 64044	89 62026	39
40 64404	90 62620	40
41 62002	91 66620	41
42 62220	92 62240	42
43 62040	93 62400	43
44 66240	94 64000	44
45 66640	95 26200	45
46 64022	96 26640	46
47 64202	97 62640	47
48 64026	98 62046	48
49 64620	99 62402	49
50 62000	00 62020	50



Providing quality
tools, parts, and
service for
the security
professional.

[Click here for more information](#)



Every
Installation
Is a Self-Portrait
Of the Person
Who Did It.
Autograph Your
Work with
Excellence.



[Click here for more information](#)

Letters

Continued from page 6

store managers in, because the key would not unlock the door. I have not yet been able to pick one of these locks, so personally in my opinion, U-Change It cylinders increase business on an emergency basis and make locksmiths look professional because of our ability to get the customer into the building. This is all due to their lack of operating knowledge and unwillingness to follow written instructions.

I have been to one store twice in one day because the store manager messed up the lock twice by trying to change the cylinders to a new key. (Why he didn't leave it alone after my first time out, is beyond me.)

Rick Sullivan is 100 percent correct when telling locksmiths not to use graphite in this particular type of cylinder. Ethically there is no reason not to accommodate your customer and use their choice of lock cylinders. Locksmiths also need to service these cylinders as requested.

I would appreciate in the future if locksmiths world-wide would refer to locksmithing as a profession, not a trade. Also, U-Change It is a cylinder not a lock. I hope this helps you with your question of ethics in this matter.

Lester S. Brodsky
Maryland

Technitips

Continued from page 15

My solution is to use a "drape" to make it darker on the outside of the car than it is on the inside. Much like a photographer's black cloth hood, the drape is used to shade the light from the side glass of the auto. A piece of black plastic tarpaulin, canvas or an old room darkening curtain will work best. Sew or fasten magnets along one edge of the drape, which can then be easily attached to the roof of the auto. While you're under the black-out curtain, you'll find that the inside of the door can be easily seen.

This Tip also prevents onlookers from discovering your magic.

J.F. Nowacki
Michigan

Identifying Key Blanks

Continued from page 26

chart by the cash register indicates the charge for each color. If you aren't watching the pricing groups today, you may be cutting keys for far less than it



Integrity.
Ingenuity....
security
solutions.

[Click here for more information](#)



**HPC has it all:
Key Machines,
Software,
Books, Car
Openers, Pick
Sets, Tools,
Door Guards,
and Key
Cabinets**

[Click here for more information](#)

costs to replace the blanks.

We are not suggesting in this article that one particular manufacturer's line is the best for you to stock. Instead, the purpose is to offer some ideas for locating a blank on your board. Cross reference books and key blank catalogues are also imperative.

Those of you who may be computerized might consider looking at Blackhawk Products key blank cross reference software (KBX). Updated every six months for a nominal charge, this program now contains over 22,000 numbers for cross reference and the August 1990 version includes Silca and Borkey, different bows, one and two shoulders, 4, 5 and 6 pin and different lengths. (It is not back-dated, however, to include the older companies so the old key books are still needed.)

When you enter a number at the search prompt, the screen immediately fills with every known blank that matches. In some instances this may be two or even three screens (or pages) of numbers. My shop uses it and likes it. This program is also helpful in organizing the keyboard and eliminating the many duplications of keyways that may be scattered from A to Z.

Manufacturers, distributors and locksmiths must recognize the numbers problem and each of us must do what works best for locating a blank, conserving space and controlling inventory. Hopefully, we have made some suggestions that may be helpful to you in sorting out this numbers mess in your own shop.

For more information contact: Blackhawk Products, 105 S. Ridgeland, Oak Park, IL 60302; Curtis Industries, Inc., 34999 Curtis Blvd., Eastlake, OH 44095; Ileo Unican Corp., 400 Jeffreys Rd., Rocky Mount, NC 27804; Silca Key Services, 9049 Dutton Drive, Twinsburg, OH 44087; Cole Consumer Products, 3110 Solon Rd., Solon, OH 44139; Engineered Security Products, 375 Harvard St., Leominster, MA 01435; Jet Hardware Mfg. Corp., 800 St., Brooklyn, NY 11027 and Star Key & Lock Co., 1274 Flushing Ave., Brooklyn, NY 11237.

Profiles, Zero Int'l.

Continued from page 61

surface, and Traction Tread is available in heavy-duty aluminum or bronze.

In 1989, Zero introduced "Z" Systems for air exfiltration, and a series of door sealing components for heads,

NATIONAL
AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

www.laserkey.com



Choose S&G
Comptronic
electronic safe
locks for...
security...
technology...
tradition.

[Click here for more information](#)

jamb, sills, door bottoms and meeting stiles. These are designed to comply with government fire regulations regarding the use of air exfiltration doors in computer rooms. Used in combination, these components for a system will provide efficient, tight seals that protect computer rooms and other "high value" areas, and maintain Halon concentration in the event of a fire.

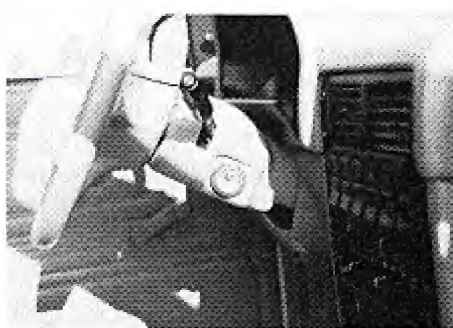
The Sound-Trap sound control systems, Zero's first innovation for the 1990's, are a series of head and jamb protection, saddles, and automatic door bottom seals which provide the highest STC (sound transmission class) ratings available.

Zero recently opened new doors when the company introduced the Unigear series of pinless continuous door hinges. These fully mortised mounting systems consist of self-lubricating Delrin TM plastic bearings that join two continuous, extruded aluminum alloy gear segments, in a cover channel to provide uniform load distribution: optimum door alignment, and maximum door support. Unigear is available in a variety of finishes, and in sizes from one to 21 feet.

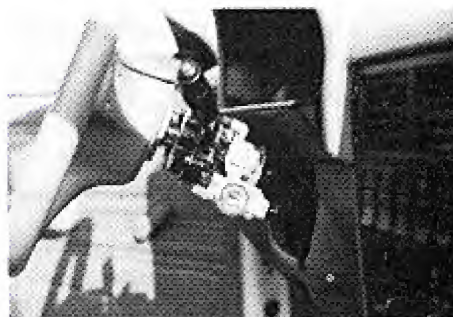
Zero International is continuing to strive to provide innovations facilitating architectural planning and offering installation solutions for door and window sealing problems.

1990 Hyundai

Continued from page 66



13. The plastic trim removed.



14. The ignition lock is fastened to the steering column.



Free
freight!!

No middle
man!!

[Click here for more information](#)



SRI and
Tech Train
Productions
are the
automotive
specialists -
your best
source for
automotive
tools,
manuals,
and videos.

[Click here for more information](#)

Use an offset screwdriver to free the electrical switch assembly from the lock housing before loosening the headless bolts. This will make the disassembly easier and avoid breaking the plastic turn signal reset lever. Photograph 15



15. The position of one of the hardened roll pins is shown.

indicates the position of one of the hardened roll pins that retain the ignition lock cylinder in the lock housing. These roll pins must be removed in order to extract the ignition cylinder. I didn't remove the ignition cylinder, but it doesn't look like it would have presented any difficulties.

Learn to read these locks. It is by far the easiest way to make a working key.

Impressioning...Fun

Continued from page 79

rushed out, at least he rushed as much as is possible for Don.

Filing the key to an edge, he slipped it into the lock and applied a little pressure. It turned, slightly. He retracted the key and noticed two deep marks. Hitting these lightly with his file, Don tried the key again. The gas cap opened.

This customer had already grumbled over Don's trip charge, so Don decided against a proud display of his rapid entry. Instead, he toyed around with the lock for a while to make the job appear more difficult than it was, hoping the customer would feel it was worth more. It did, and everyone was happy.

Don no longer wastes time like that, by the way. Instead he now prides himself on quick, efficient service. When someone compares his price against the time spent in a complaining fashion, Don's response is something like: "I can take longer if that will make you happy. I thought you wanted to be on your way. Getting in quickly is a result of my training and experience, and that is part of what you pay for."

What can they say? They're impressed!



The world's
largest
producer of
automotive
locks and
keys.

[Click here for more information](#)